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FINAL

ENVIRONMENTAL ASSESSMENT

Oil & Gas and Geothermal Leasing in the White Sands Resource Area

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Las Cruces, New Mexico

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W452
1981b

March 3, 1849

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
District Office
P. O. Box 1420
Las Cruces, New Mexico
88004

IN REPLY REFER TO
WS O&G EA

RECEIVED
OCT 15 1981
OFFICE OF DCM, GEOTHERMAL
CONSERVATION DIVISION
U.S. GEOLOGICAL SURVEY
MENLO PARK, CALIFORNIA

OCT 8 1981

William F. Isherwood
U. S. Department of the Interior
Geological Survey
Conservation Division, MS-92
345 Middlefield Road
Menlo Park, CA 94025

Dear Mr. Isherwood:

Enclosed is the Final Environmental Assessment on Oil & Gas and Geothermal Leasing in the White Sands Resource Area. The mitigating measures identified in Chapter 1 of the draft EA will be attached to leases as special stipulations. Please let us know if you concur with these stipulations.

We thank you and Mr. Hoops for reviewing and commenting on the draft EA.

Sincerely yours,

Larry Nunez

Larry Nunez
Area Manager
White Sands Resource Area

Enclosure

WHIT
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RECEIVED
OCT 15 1981
OFFICE OF DCM, GEOTHERMAL
CONSERVATION DIVISION
U.S: GEOLOGICAL SURVEY
MENLO PARK, CALIFORNIA

NOTICE

THIS IS THE FINAL ENVIRONMENTAL ASSESSMENT (EA) FOR OIL & GAS AND GEOTHERMAL LEASING IN THE WHITE SANDS RESOURCE AREA. THIS EA INCORPORATES THE DRAFT EA BY REFERENCE, AND INCLUDES CHANGES TO THE DRAFT RESULTING FROM PUBLIC REVIEW AND COMMENT, A RECORD OF PUBLIC COMMENT ON THE DRAFT AND THE RESPONSES TO THOSE COMMENTS. THE DRAFT EA AND THIS FINAL EA TOGETHER CONSTITUTE THE COMPLETE FINAL ENVIRONMENTAL ASSESSMENT.

A LIMITED NUMBER OF COPIES OF THE DRAFT EA ARE AVAILABLE FROM THE BLM LAS CRUCES DISTRICT OFFICE, P. O. BOX 1420, LAS CRUCES, NEW MEXICO 88004.

March 3, 1849

IN REPLY REFER TO

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
DISTRICT OFFICE
P. O. Box 1420
Las Cruces, New Mexico
88004

Dear Reader:

The Final Environmental Assessment on Oil & Gas and Geothermal Leasing in the White Sands Resource Area has been completed.

The final assessment was prepared using the comments received through the public review process. The final environmental assessment is a departure from the usual procedure of completely reprinting the draft environmental assessment with changes based on public input. The changes suggested from the public review process did not require a major rewrite, and substantial cost saving could be realized by printing only the responses to comments and the modifications and corrections. This document should be used with the draft assessment.

The final assessment is not the decision document. The decision on the proposed action will be based on the analysis contained in the draft EA and public concerns and comments.

Thanks to those who assisted in the preparation of this environmental assessment by providing suggestions and comments.

Sincerely yours,

Larry Nunez

Larry Nunez
Area Manager
White Sands Resource Area

CONSERVE AMERICA'S ENERGY

Save Energy and You Serve America!

ID 88068494

NM-030-81-58

TD
195
.P4
W452
1981b

FINAL

ENVIRONMENTAL ASSESSMENT

OIL & GAS AND GEOTHERMAL LEASING
IN THE
WHITE SANDS RESOURCE AREA

Prepared by

UNITED STATES

DEPARTMENT OF THE INTERIOR

BUREAU OF LAND MANAGEMENT

LAS CRUCES DISTRICT OFFICE
WHITE SANDS RESOURCE AREA
1705 N. VALLEY DR.
P. O. BOX 1420
LAS CRUCES, NM 88004

CONTACT: TOM CUSTER, TEAM LEADER
TELEPHONE - 505 523-5571
FTS - 572-0275

September, 1981

Larry Nunez
Larry Nunez, Area Manager
White Sands Resource Area

TABLE OF CONTENTS

Page

CONSULTATION AND COORDINATION 1

MODIFICATIONS AND CORRECTIONS TO THE DRAFT EA 27

Errata 27

Changes to the Text 30

TABLES

Table 1 - Comment Letters Received 4

CONSULTATION AND COORDINATION

Public Notice

The public was notified of the BLM's intention to prepare an Environmental Assessment (EA) on oil & gas and geothermal leasing in February 1981. Letters were sent to 48 groups, associations, companies, and government agencies. A news release was also sent to various newspapers, radio stations, and other media representatives throughout the Las Cruces District. In response, six letters were received which are available for review at the Las Cruces District Office.

Consultation and Coordination

Members of the EA Team contacted various agencies, organizations, and individuals during the preparation of the draft EA.

Public Review of Draft EA

The draft EA was sent to the following list of agencies, groups, and individuals on August 28, 1981. On that same date a news release was sent to various newspapers, radio stations, and other media representatives in the Las Cruces District. An asterick indicates those who responded.

Federal Government

Bureau of Reclamation
Department of the Army
  *White Sands Missile Range
  Fort Bliss
U.S. Fish & Wildlife Service
*U.S. Forest Service
*U.S. Geological Survey
*U.S. Soil Conservation Service
Office of Surface Mining & Protection

New Mexico State Government

*Bureau of Mines and Mineral Resources
Cultural Resources Management Division - N.M. State University
*Department of Finance & Administration - Planning Division
  (Includes comments from State Engineer and Environmental Improvement Division).
Department of Fishery & Wildlife Science - N.M. State University
*Department of Game & Fish
*Energy & Minerals Department
Oil Conservation Division
State Historic Preservation Officer
*State Land Office

Regional and Local Agencies

County Commissioners - Otero County
County Commissioners - Sierra County
Mescalero Indian Tribe
Otero County Planning Commission
Southern Rio Grande Council of Governments
Southeastern New Mexico Economic Development District

Companies, Groups, Organizations

Dona Ana County Archaeological Society
El Paso Archaeological Society
El Paso 4x4 Club
Human Systems Research, Inc.
*Las Cruces Jeep Club
Las Cruces ORV Club
N.M. Archaeological Council
*N.M. Natural History Institute
N.M. Oil & Gas Association
N.M. Wildlife Federation
N.M. Wildlife Society
Otero County Wildlife Federation
Prairie Dawgs Motorcycle Club
*Sierra Club - Rio Grande Chapter
Tularosa Basin Historical Society
Wilderness Society

Mineral Industry

Aminoil USA
Anadarko Production Co.
Atlantic Richfield Co.
Beard Oil Co.
Chevron USA, Inc.
Cities Service Oil Co.
Eastland Oil Co.
Getty Oil Co.
Gulf Oil Co.
Houston Oil and Minerals Corp.
Hunt Energy Corp.
Mobil Producing Texas and New Mexico
Phillips Petroleum Co.
Placid Oil Co.
Texaco Inc.

List of Preparers

The draft and the final EA were prepared by the following people:

Name	EA responsibility	Education	Experience
Sergio Acosta	Social Economics	B.A., Social Science New Mexico State University	BLM-1 year Social Scientist
Tom Custer	Team Leader Physical Setting Geologic Hazards Water Resources	B.S., Geology New Mexico State University	BLM-6 years Geologist USGS-1 yr. Physical Science Technician
Ben Fish	Recreation Visual Resources Wilderness	B.S., Recreation & Park Administration Eastern Kentucky University M.S., Recreation & Resources Development Texas A&M University	BLM-4 years Outdoor Recreation Planner
Sandy Hayes	Wildlife	B.S., Wildlife Science, New Mexico State University	BLM-3 years Wildlife Biologist, Range Conservationist
Steve Henke	Soils & Vegetation	B.S., Range Science New Mexico State University	BLM-5 years Range Conservationist
Pete Laudeman	Cultural Resources	B.A., M.A. Anthropology University of Arizona	BLM-6 years Archaeologist
Bob Lawrence	Soils & Vegetation	2 yrs. at Western New Mexico University	BLM-15 years Range Conservationist
Candace Ojala	Cultural Resources	B.A., Anthropology Art, History M.A., Anthropology Stanford University	BLM-2 years Outdoor Recreation Planner Archaeologist Environmental Specialist

Comments and Responses

Individuals or organizations who sent letters during the comment period are listed in Table 1. All letters are reproduced here in their entirety. The responses are presented adjacent to the comments in each letter.

Responses have been made to all substantive comments presented in the letters. Substantive comments were considered to be those which addressed either the adequacy or accuracy of the draft EA. Any additional letters received will receive full consideration in the final decision.

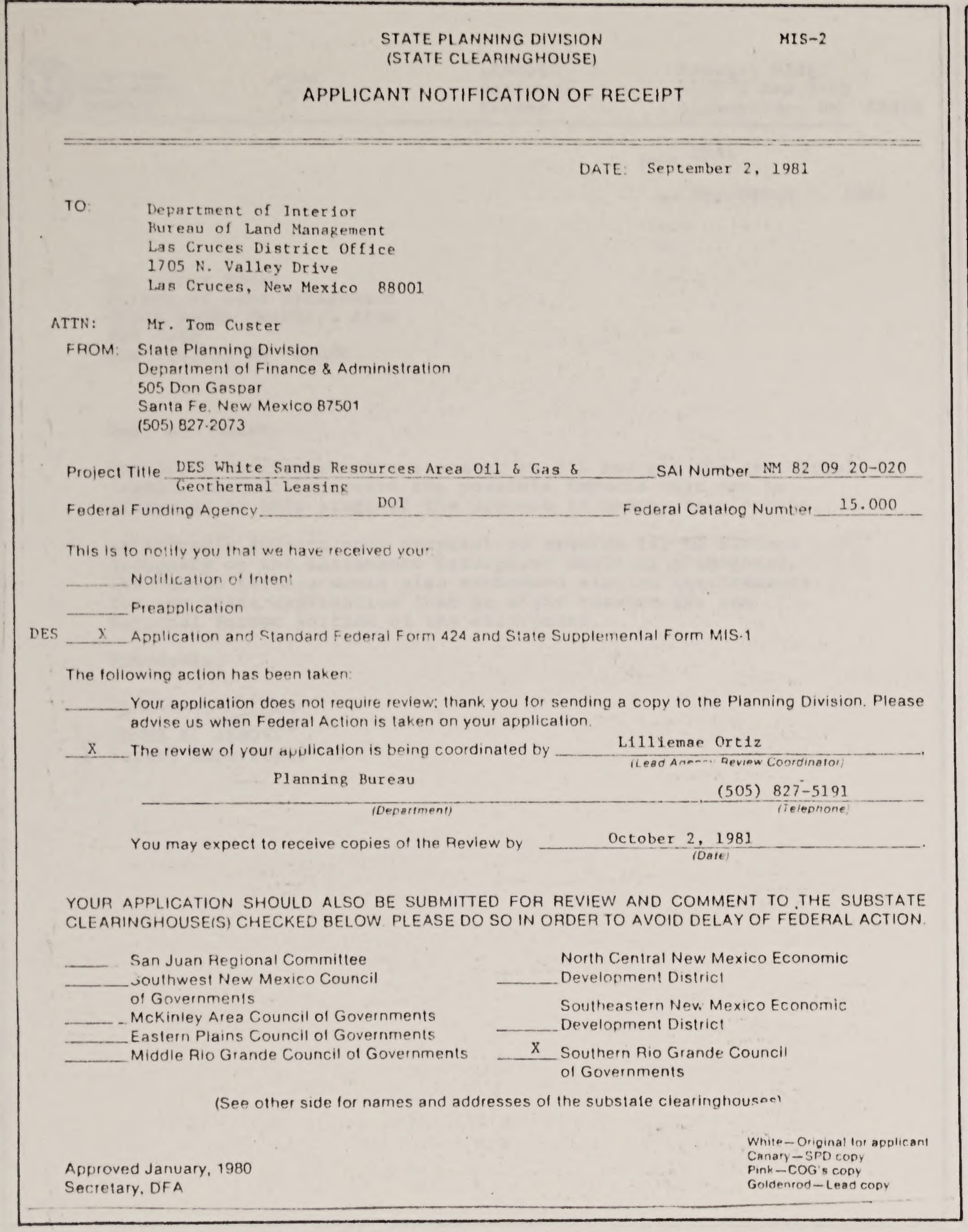
From the comments received, it is evident that the major concern was the apparent lack of or inadequacy of mitigating measures in the draft EA. As has been clarified in the revised page 1 of the draft EA, a regional leasing EA of this nature is not intended to identify all of the possible impacts that would occur from leasing in the WSRA, nor is it intended to identify all of the possible ways in which to mitigate those impacts. Each phase of oil & gas or geothermal development must undergo strict environmental review, at which time mitigating measures are developed.

TABLE 1

Comment Letters Received

Assigned Number in Order of Receipt	Name of Commentator
1	State Planning Division (State Clearinghouse)
2	N.M. Bureau of Mines & Mineral Resources
3	Lincoln National Forest
4	Sierra Club
5	Soil Conservation Service
6	New Mexico Natural History Institute
7	Las Cruces Jeep Club
8	White Sands Missile Range
9	State Planning Division (State Clearinghouse)
10	U.S. Geological Survey

1



STATE PLANNING DIVISION MIS-2
(STATE CLEARINGHOUSE)

APPLICANT NOTIFICATION OF RECEIPT

DATE: September 2, 1981

TO: Department of Interior
Bureau of Land Management
Las Cruces District Office
1705 N. Valley Drive
Las Cruces, New Mexico 88001

ATTN: Mr. Tom Custer

FROM: State Planning Division
Department of Finance & Administration
505 Don Gaspar
Santa Fe, New Mexico 87501
(505) 827-2073

Project Title DES White Sands Resources Area Oil & Gas & Geothermal Leasing SAI Number NM 82 09 20-020

Federal Funding Agency DOI Federal Catalog Number 15.000

This is to notify you that we have received your:

______ Notification of Intent

______ Preapplication

DES __X__ Application and Standard Federal Form 424 and State Supplemental Form MIS-1

The following action has been taken:

______ Your application does not require review; thank you for sending a copy to the Planning Division. Please advise us when Federal Action is taken on your application.

__X__ The review of your application is being coordinated by Lilliemae Ortiz (Lead Agency Review Coordinator)

Planning Bureau (Department) (505) 827-5191 (Telephone)

You may expect to receive copies of the Review by October 2, 1981 (Date).

YOUR APPLICATION SHOULD ALSO BE SUBMITTED FOR REVIEW AND COMMENT TO THE SUBSTATE CLEARINGHOUSE(S) CHECKED BELOW. PLEASE DO SO IN ORDER TO AVOID DELAY OF FEDERAL ACTION.

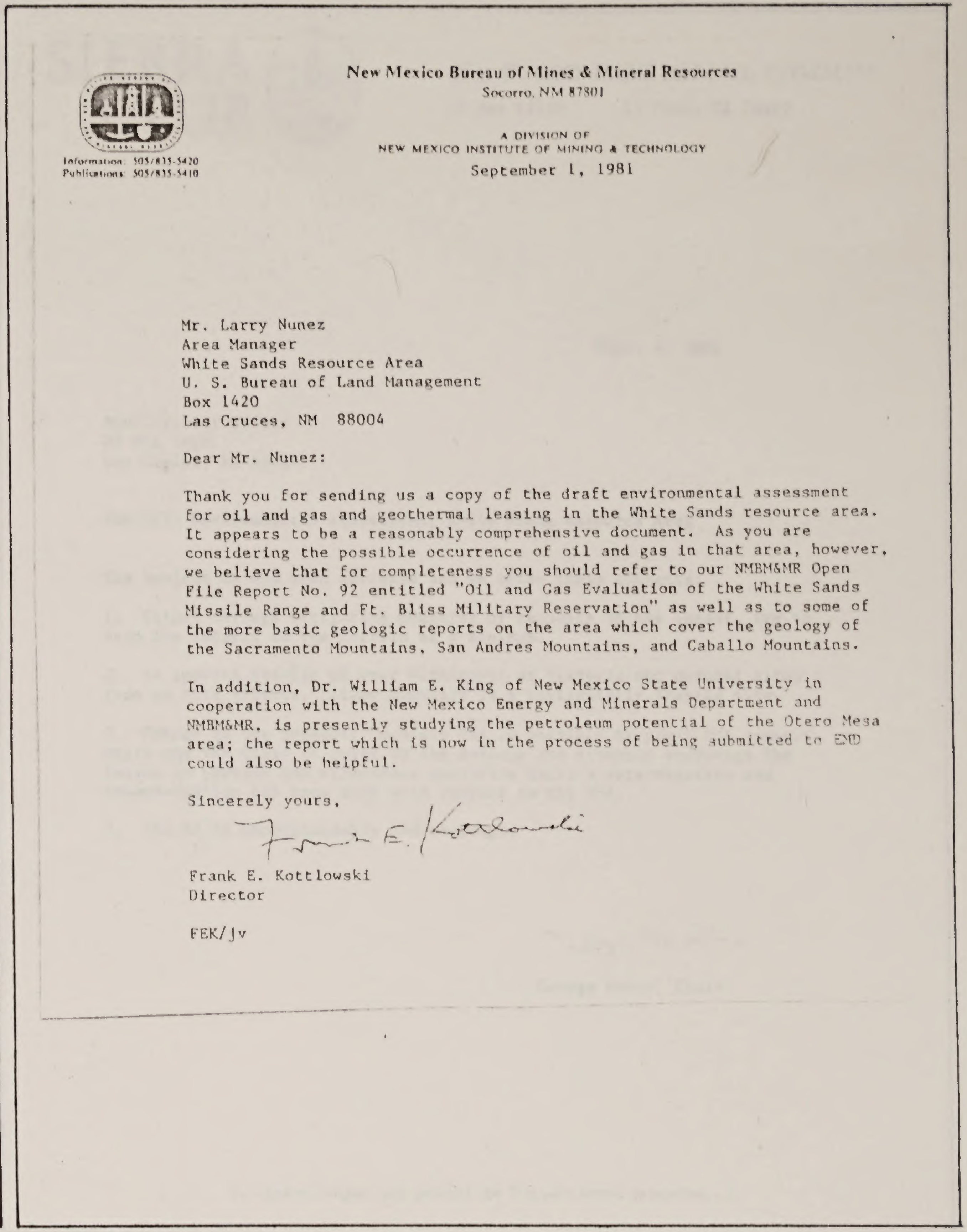
______ San Juan Regional Committee
______ Southwest New Mexico Council of Governments
______ McKinley Area Council of Governments
______ Eastern Plains Council of Governments
______ Middle Rio Grande Council of Governments
______ North Central New Mexico Economic Development District
______ Southeastern New Mexico Economic Development District
__X__ Southern Rio Grande Council of Governments

(See other side for names and addresses of the substate clearinghouses)

Approved January, 1980
Secretary, DFA

White—Original for applicant
Canary—SPD copy
Pink—COG's copy
Goldenrod—Lead copy

2



New Mexico Bureau of Mines & Mineral Resources
Socorro, NM 87801

A DIVISION OF
NEW MEXICO INSTITUTE OF MINING & TECHNOLOGY

Information: 505/835-5420
Publications: 505/835-5410

September 1, 1981

Mr. Larry Nunez
Area Manager
White Sands Resource Area
U. S. Bureau of Land Management
Box 1420
Las Cruces, NM 88004

Dear Mr. Nunez:

Thank you for sending us a copy of the draft environmental assessment for oil and gas and geothermal leasing in the White Sands resource area. It appears to be a reasonably comprehensive document. As you are considering the possible occurrence of oil and gas in that area, however, we believe that for completeness you should refer to our NMBM&MR Open File Report No. 92 entitled "Oil and Gas Evaluation of the White Sands Missile Range and Ft. Bliss Military Reservation" as well as to some of the more basic geologic reports on the area which cover the geology of the Sacramento Mountains, San Andres Mountains, and Caballo Mountains.

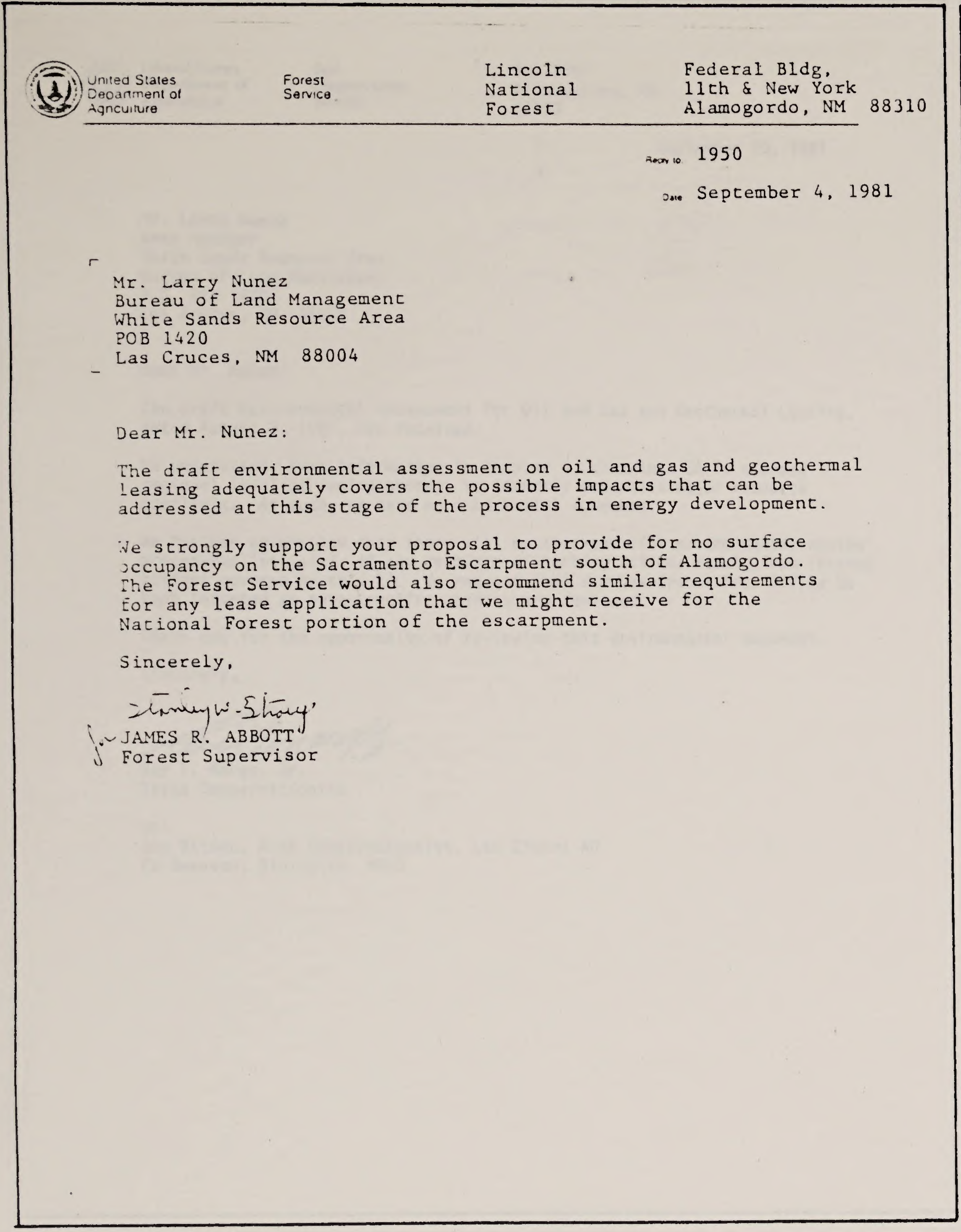
In addition, Dr. William E. King of New Mexico State University in cooperation with the New Mexico Energy and Minerals Department and NMBM&MR, is presently studying the petroleum potential of the Otero Mesa area; the report which is now in the process of being submitted to EMD could also be helpful.

Sincerely yours,

Frank E. Kottlowski
Director

FEK/jv

3



United States Department of Agriculture
Forest Service

Lincoln
National
Forest

Federal Bldg,
11th & New York
Alamogordo, NM 88310

Reply to 1950

Date September 4, 1981

Mr. Larry Nunez
Bureau of Land Management
White Sands Resource Area
POB 1420
Las Cruces, NM 88004

Dear Mr. Nunez:

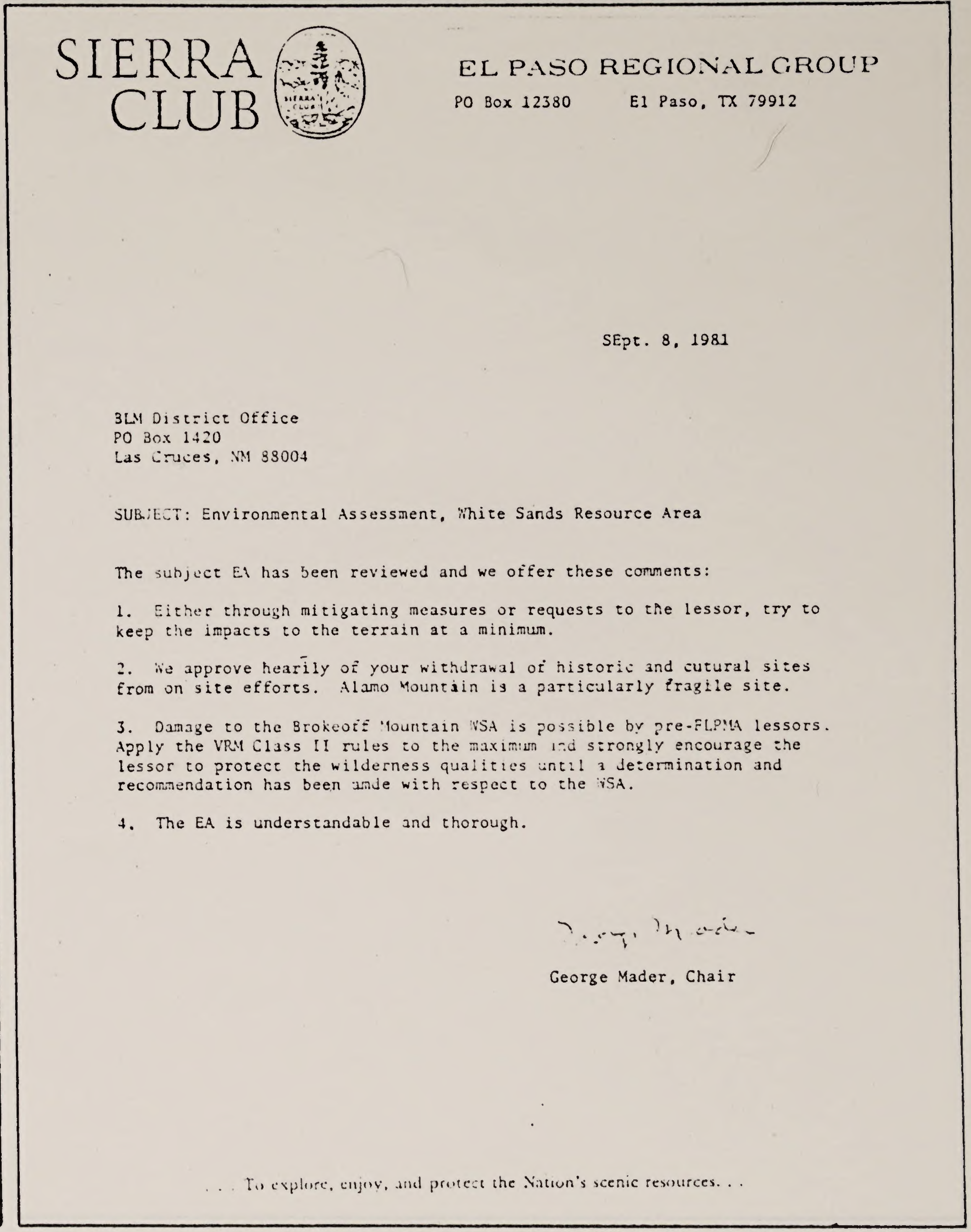
The draft environmental assessment on oil and gas and geothermal leasing adequately covers the possible impacts that can be addressed at this stage of the process in energy development.

We strongly support your proposal to provide for no surface occupancy on the Sacramento Escarpment south of Alamogordo. The Forest Service would also recommend similar requirements for any lease application that we might receive for the National Forest portion of the escarpment.

Sincerely,

Stanley W. Story
JAMES R. ABBOTT
Forest Supervisor

4



SIERRA CLUB

EL PASO REGIONAL GROUP
PO Box 12380 El Paso, TX 79912

SEpt. 8, 1981

BLM District Office
PO Box 1420
Las Cruces, NM 88004

SUBJECT: Environmental Assessment, White Sands Resource Area

The subject EA has been reviewed and we offer these comments:

1. Either through mitigating measures or requests to the lessor, try to keep the impacts to the terrain at a minimum.

2. We approve hearily of your withdrawal of historic and cutural sites from on site efforts. Alamo Mountain is a particularly fragile site.

3. Damage to the Brokeoff Mountain WSA is possible by pre-FLPMA lessors. Apply the VRM Class II rules to the maximum and strongly encourage the lessor to protect the wilderness qualities until a determination and recommendation has been amde with respect to the WSA.

4. The EA is understandable and thorough.

George Mader, Chair

. . . To explore, enjoy, and protect the Nation's scenic resources. . .

5

United States
Department of
Agriculture

Soil
Conservation
Service

Box 2007
Albuquerque, NM
87103

September 10, 1981

Mr. Larry Nunez
Area Manager
White Sands Resource Area
Bureau of Land Management
P.O. Box 1420
Las Cruces, NM 88004

Dear Mr. Nunez:

The draft Environmental Assessment for Oil and Gas and Geothermal Leasing, dated August 8, 1981, was received.

We understand, from information in Chapter 1, that this EA is a broad regional level screening process to identify potential major resource conflicts. As such, we have no substantial comments.

We further understand that there will be site-specific environmental review procedures initiated, if any resource disturbing actions result from leasing actions covered by this EA. We request that our Las Cruces Area Office be kept informed as site-specific actions are reviewed.

Thank you for the opportunity of reviewing this environmental document.

Sincerely,

Ray T. Margo, Jr.
State Conservationist

cc:
Joe Batson, Area Conservationist, Las Cruces AO
Ed Swenson, Biologist, NMSO

6

THE NEW MEXICO NATURAL HISTORY INSTITUTE
A Nonprofit Corporation
Box 369, St. Johns College
Santa Fe, New Mexico 87501

NEW MEXICO NATURAL HISTORY INSTITUTE
Henry M. Zeller, Secretary
Post Office Box 870
Silver City, New Mexico ~~88061~~ 88062-0870

SEP 14 1981

Mr Larry Nunez, Area Manager
White Sands Resource Area
BLM District Office
Post Office Box 1420
Las Cruces, New Mexico 88004

Subject: Comments on "Environmental Assessment - Oil & Gas and Geothermal Leasing in the White Sands Resource Area."

Dear Mr Nunez:

6-1 From the point of view of an outsider (not a BLM employee), the EA does not accomplish its prime function, as stated in the third paragraph on Page 1. The paragraph infers that some protection to resource values is afforded by "existing mitigating measures and standard operating procedures". But there is nowhere any adequate explanation of what this means. Appendix A gives a narrative of procedures, but nothing in principle or substance. Appendix B is merely a list of references to regulations, forms, etc, which mean nothing to the uninitiated. No policy statement is provided to show how rigorously the regulations, etc, are to be applied. We are left unconvinced.

Outside of this unexplained and therefore questionable "protection" afforded, ostensibly as a matter of routine, there is nothing more, in terms of mitigation, than a listing of a few places and areas for which specific restraints are to be prescribed. This is perhaps for the good, but for the naturalist hope wanes as the list is examined. Of the places and areas listed as "mitigating measures", one is a communications site, one is set aside as a Missile Range extension, one is for recreation, one for scenic values, three are cultural, two are dubiously protected WSA's, and six are so-called "ecological plots". These all appear on Figure 1, where reference is also made to general protection of threatened and endangered plants and animals, and of cultural sites covered elsewhere. Only the six ecological plots involve any consideration of the bulk of the living biota of the Resource Area, and only two of these, although still relatively small, are large enough to have any faint claim to ecological value, the rest being merely small exclosures to deny vegetation to livestock. As a matter of fact, there is some doubt that the three listed as 2A, 8A, and 8B are actual exclosures. Several years ago I was told by a resource official of the State [illegible] to drop [illegible] small (40-acre) plots from further consideration as natural [illegible], because they had never been fenced. The three plots listed were among [illegible]. The categorization of these places and areas as "mitigating measures" [illegible]. The EA brings out no mitigating measures worthy of the name

6-1 See revised page 1 of the draft EA.

6

affecting the Resource Area as a whole.

We see the threat of unmitigated oil, gas, and geothermal exploitation as quite serious for an area that has already been thoroughly beaten about by human activity. The entire White Sands Resource Area can be described as man-made desert, whereas it was formerly more of an ecotone covered by grassland at its xeric limit. Now little grassland remains, the degeneration of the vegetation having been caused primarily by overgrazing during the last 100 years. The present degenerated situation is described in Table 1 of the EA. This description is for Sierra County, but is said to be approximately correct for Otero as well.

Adding up the percentages shown, one finds that 43+% of the area of Sierra County has no grass at all, vegetative cover being purely desert scrub. The remaining 57+% has some grass mixed with desert scrub or scatterings of juniper and/or pinon. The change that has occurred over the last century is aptly to be described as desertification. This is an imperceptible process which undoubtedly continues under present management practices, which are difficult to improve because of the resistance of livestock operators interested only in the short term.

The ecological change which the vegetation, and necessarily the fauna also, has undergone and will continue to suffer unless there is drastic improvement in its use, is germane to any impact of oil, gas, or geothermal exploitation. Desertification was brought on and is maintained primarily by the overgrazing of domestic livestock, but there are many forms of land use that are quite capable of doing their share of the damage. The present EA [illegible] [illegible]-tive of this fact. It is obvious that true mitigative measures of general application are in order.

Mitigative measures should be devised that can help the fauna as well as the vegetation. The only treatment of wildlife available in my copy of the EA is on Page 28 (as printed). Probably two pages of text on wildlife are missing, because the next page back from 28 is page 25, which has text on water. In any event, what the EA has to say on Page 28 is ominous for wildlife if the Resource Area should receive intensive development activity. It is obvious that intelligent foresight is absolutely necessary.

In the EA only two alternatives are considered: no action, and the preferred alternative. The latter would permit oil, gas, and geothermal exploitation at will except for "appropriate environmental protection stipulations", which are either very meager or are too vaguely passed over to be convincing.

We recommend consideration of a third alternative, which would provide for limited leasing. The BLM controls the bulk of the lands of this Resource Area, so the agency should have some latitude in decision. A number of selected

6

large tracts in different quarters of the Resource Area could be denied to leasing in the first instance. These tracts should be large enough to be relatively self-contained ecologically, or at least to furnish adequate refuges for large grazing animals, say 5,000 acres each. Effort should be made to find such areas without existing leases in disturbing numbers. Leasing could proceed elsewhere, but under a comprehensive, detailed mitigation plan. The closed areas could perhaps be opened up later individually, concurrent with compensating abandonment, with some allowance for recovery, of tracts leased initially.

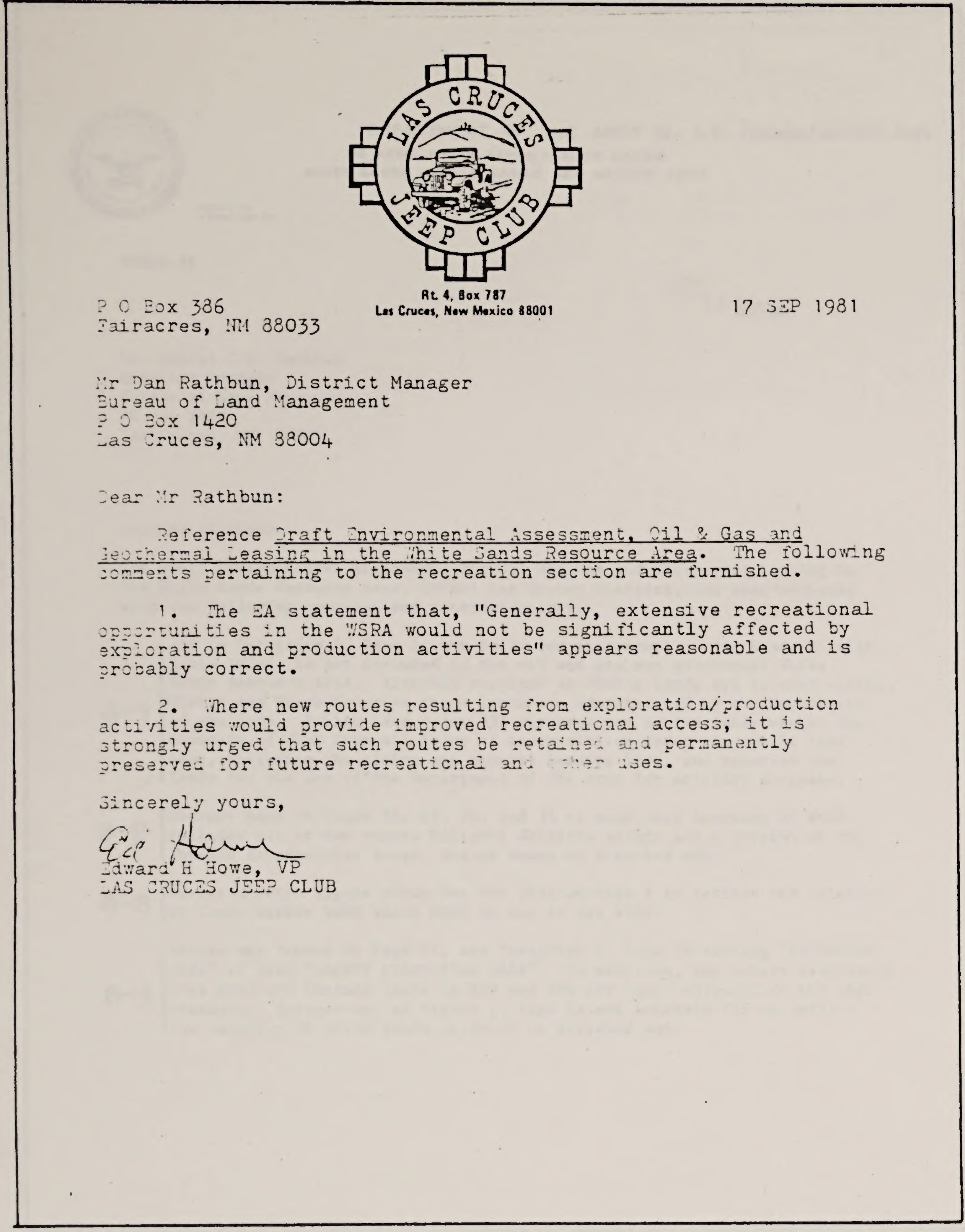
Someone better acquainted than I with leasing procedures, etc, and with oil, gas, and geothermal operations, could easily build up the details of this alternative. The basic ideas are not to commit the entire Resource Area to leasing all at once, and at the same time to provide areas free from the disturbance of exploitive activity for the benefit of wildlife. In addition, there ought to be a comprehensive, detailed mitigation plan. The destruction of vegetation and habitat, and the hazards to wildlife incident to exploitive activity are well known. Southeast New Mexico has had much experience with all this. With advance knowledge of all the things that can go wrong, we should simply not let them happen. A plan is a necessity, followed by implementing action. It must be made clear to the managers of the activities that "business as usual" will not be tolerated.

Please reproduce this letter in the final version of the Environmental Assessment.

Sincerely,

Henry [illegible]
Secretary

7



LAS CRUCES JEEP CLUB
Rt. 4, Box 787
Las Cruces, New Mexico 88001

P O Box 386
Fairacres, NM 88033

17 SEP 1981

Mr Dan Rathbun, District Manager
Bureau of Land Management
P O Box 1420
Las Cruces, NM 88004

Dear Mr Rathbun:

Reference Draft Environmental Assessment, Oil & Gas and Geothermal Leasing in the White Sands Resource Area. The following comments pertaining to the recreation section are furnished.

1. The EA statement that, "Generally, extensive recreational opportunities in the WSRA would not be significantly affected by exploration and production activities" appears reasonable and is probably correct.

2. Where new routes resulting from exploration/production activities would provide improved recreational access, it is strongly urged that such routes be retained and permanently preserved for future recreational and other uses.

Sincerely yours,

Ed Howe
Edward H Howe, VP
LAS CRUCES JEEP CLUB

8

DEPARTMENT OF THE ARMY Mr. A.N. Johnson/aes/678-2224
US ARMY WHITE SANDS MISSILE RANGE
WHITE SANDS MISSILE RANGE, NEW MEXICO 88002

REPLY TO
ATTENTION OF

STEWS-FE

18 SEP 1981

Mr. Daniel C.B. Rathbun
District Manager
Bureau of Land Management
PO Box 1420
Las Cruces, NM 88001

Dear Mr. Rathbun:

The Draft Environmental Assessment for Oil and Gas and Geothermal Leasing in the White Sands Resource Area, (WSRA) Las Cruces District, has been reviewed with the following comments and recommendations:

8-1 Add to Paragraph 2, Page 1, the following statement: White Sands Missile Range (WSMR) is not included in the oil and gas and geothermal White Sands Resource Area. Although portions of WSMR's lands are located within Sierra and Otero Counties these lands are administered by the Department of the Army. Public Land Order 833 withdrew the public lands within the boundary of WSMR from all forms of appropriation under the public land laws, including the mining and mineral leasing laws, and reserved the lands for the use of the Department of the Army for military purposes.

8-2 Correct maps on Pages 14, 27, 30, and 35 to show that boundary of WSMR includes all of San Andres National Wildlife Refuge and a portion of the Jornado Experimental Range, and as shown on attached map.

8-3 Revise acreage figure shown for the WSRA on Page 2 to reflect the deletion of lands within WSMR since WSMR is not in the WSRA.

8-4 Revise map legend on Page 14, and Paragraph 5, Page 10 wording "EXTENSION AREA" to read "SAFETY EVACUATION AREA". In addition, the safety evacuation area does not include lands in R2W and R3W nor lands adjacent to the east boundary. Correct map at Figure 1, Page 14 and Appendix F#5 to reflect the deletion of these lands as shown on attached map.

8-1 This paragraph has been revised. It should have been written more clearly to explain that that only lands open to mineral leasing were being assessed. See revised page 1 of the draft EA.

8-2 Corrections have been made. See Errata section under Figures.

8-3 Acreage figures were incorrect and have been corrected. See Errata section Chapter 1, page 2.

White Sands Missile Range is in the WSRA. The WSRA consists of all lands within Otero and Sierra Counties.

8-4 Corrections have been made. See Errata section under Figures and Chapter 1, page 10. See also revised Figure 1 and revised Appendix F (Mitigating Measure #5).

8

18 SEP 1981

STEWS-FE
Mr. Daniel C.B. Rathbun

Thank you for the opportunity to review and comment on the draft EA. We look forward to seeing our comments included in the final Environmental Assessment.

Sincerely,

FRANCIS R. GEISEL
Colonel, CE
Director, Facilities Engineering

1 Incl
Map

9

PLANNING DIVISION
(STATE CLEARINGHOUSE)
MIS-4
Review and Comment

DATE: 9-3-81

TO: Wm. Oscar Jordan, Attorney
State Land Office

FROM: [redacted]

RE: NM 82 09 02-020 — SAI NUMBER
Draft Environmental Assessment - Oil and Gas and Geothermal Leasing in the White Sands Resource Area — PROJECT TITLE

Planning Division
LEAD AGENCY

Please review and comment on the above application and return to the sender by 9-16-81

1. Does this plan duplicate any programs which have similar goals and objectives to the proposed application?
______Yes (If yes, please identify these programs.)
XXXX No

2. Does the proposed application conform with a comprehensive plan developed for the area in which it is located?
______Not applicable
______Yes
XXXX No (If no, please explain in what way it is not compatible.)

SEE ATTACHMENT

3. Does the proposed application conflict with any applicable statute, order, rule, or regulation (federal, state or local)?
XXXX Yes (If yes, please cite the conflicting statute, order, rule or regulation.)
______No

SEE ATTACHMENT

4. Describe any suggestions or means of improving or strengthening the proposed application.

SEE ATTACHMENT

______No interest in, or comment on, this project.
______Proposal is supported.
______Proposal is supported with recommendations.
______Proposal is not supported.
______Further information needed, review suspended and applicant notified of request.
XXXX Comments attached.

On the basis of my review, I have indicated my response and/or recommendations above.

______ Signature of Reviewer

General Counsel — Title

September 16, 1981 — Date

New Mexico State Land Office — Agency

Approved July, 1979
Secretary, DFA

1 - white - to applicant
1 - yellow - SPD copy
2 - pink
1 - lead agency
1 - review division

9

ATTACHMENT TO MIS-4 - REVIEW AND COMMENT FORM

State of New Mexico

Commissioner of Public Lands

ALEX J. ARMIJO
COMMISSIONER

P. O. BOX 1148
SANTA FE, NEW MEXICO 87501

September 15, 1981

M E M O R A N D U M

TO: Commissioner Alex J. Armijo

FROM: William O. Jordan, General Counsel

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT - OIL & GAS AND GEOTHERMAL LEASING IN THE WHITE SANDS RESOURCE AREA

The State Planning Office has asked us to respond to the Draft Environmental Assessment relative to the White Sands Resource area.

As I understand the situation, the demand for energy sources has brought about a proposed policy to increase domestic production; and as part of that plan, they are looking at the possibility of leasing of military ranges for oil and gas and geothermal resources and that assessment deals with the environmental, the social, and economic impact. 9–1

Because of the factual situation, some comments can be made which would fit under paragraphs 2 and 3 of the State Planning Office Form MIS-4, "Review and Comment" form, and that is as follows:

The history has been that during World War II, the Federal Government started acquiring the use of the White Sands Missile Range by increments, primarily by acquiring them under exclusive military use lease basis; and this lease system continued until about 1975, at which time the military started acquiring some of the private lands and some of the state lands on a fee simple basis. At the present time, all of the private lands have been acquired in fee simple. Therefore, the makeup of the range is now all federal, excepting

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9-1 White Sands Missile Range is not open to mineral leasing and was not among the lands being addressed in the draft EA. It is unfortunate that this was not clearly stated in Chapter 1.

See response to comment 8-1 and revised page 1 of the draft EA.

9

for about 300,000 acres which are owned in fee simple by this Office and are administered by the Commissioner of Public Lands. These lands are currently under a ten-year lease for military purposes. Under that lease, the Federal court in the "lost treasure case" determined that the Federal Government had the exclusive right to use of the lands but did not own the minerals, and those minerals could be leased only by the State of New Mexico and access to the land could be acquired only with the approval of the military. In short, the Federal Government has the exclusive right to the use of the lands for military purposes only. This right will extend for the balance of the ten-year term, ending June 30, 1990, unless extended.

In this connection, the Federal Government has the authority to purchase these 300,000 acres of state land in fee simple and has manifested in writing its intention to do so when the money is available.

This factual situation creates numerous problems as follows:

If the Government decides to lease for oil and gas and geothermal its acquired lands, which would be the lands it acquired from private parties, there would be drainage of the 300,000 state acres because the state cannot lease its acreage for oil and gas and geothermal purposes without the military's approval.

Now, if the Government leases its acquired lands and they can be developed without unduly interfering with military operations, then there is no reason why the state could not be allowed to lease its lands for oil and gas and geothermal purposes and have them developed at the same time. By the same token, if the Federal Government can permit its lands in the Range to be leased for oil and gas and geothermal purposes, then it has no reason to condemn that particular interest—either a leasehold interest or in fee simple. In short, it should merely condemn only such use of the surface as is necessary for its military operations.

There is an additional problem if the Government decides to condemn and that is that the burden of proving value for oil and gas purposes is upon the state, and it has not had the opportunity to explore these lands during the past 30-40 years. Stated simply, if the state could lease for oil and gas and geothermal at public auction, it would get much more revenue than in a condemnation suit because in the latter the landowner has to prove the resource is there and it cannot get access to explore to so prove.

9

If the Government would lease some of its lands and they were explored, the value of them could be determined and the state would receive what they're actually worth, not a speculative value, that is, assuming the Government would then condemn the lands at that time. It could, however, as previously pointed out, simply hold them under the current lease arrangement and drain them by wells on adjoining federal land; or it could condemn the fee then lease all the land for oil and gas and geothermal.

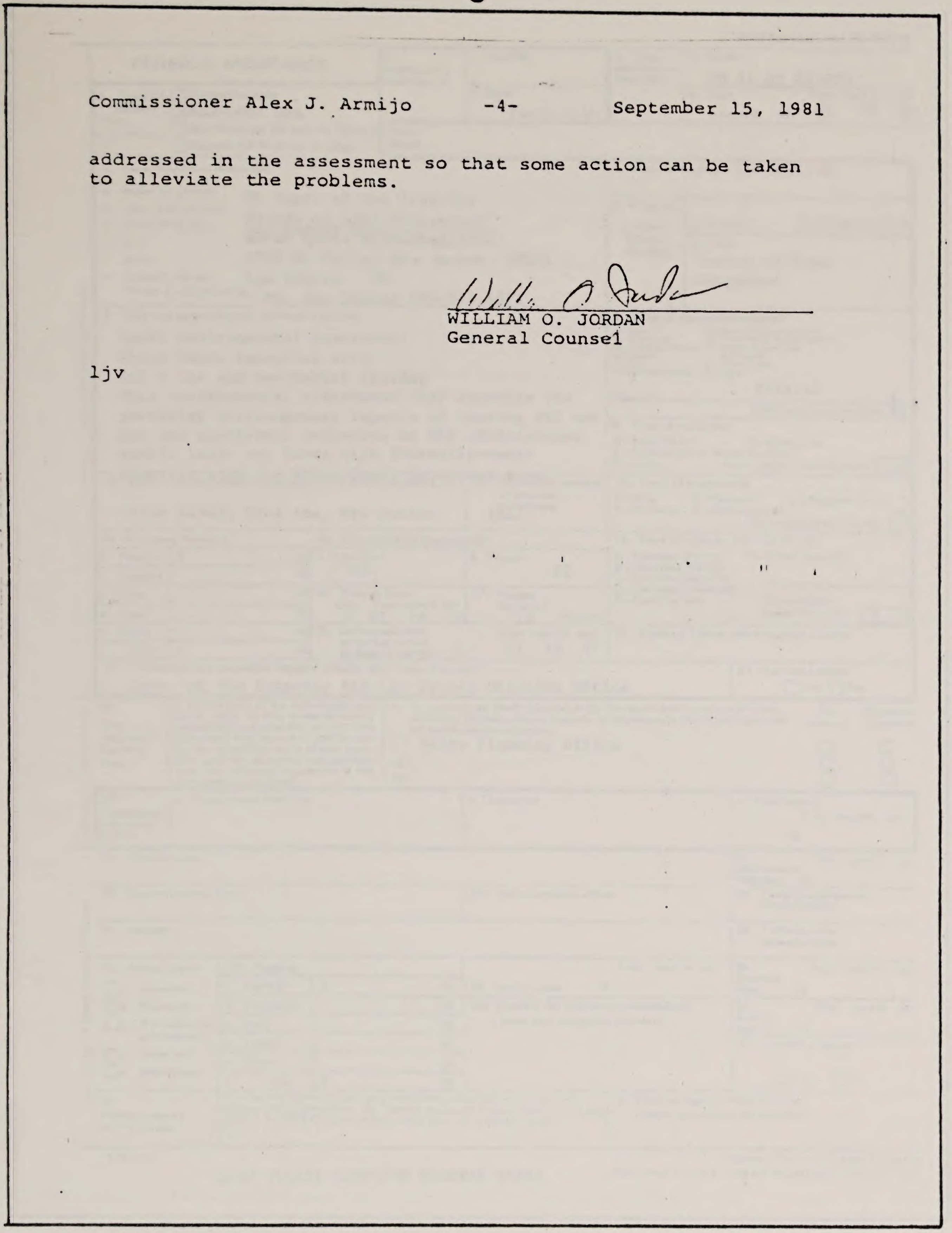
In this connection, our petroleum engineer and our geologist are of the opinion that the lands have a high potential for oil and gas development in that the geological formations are quite similar to those in southeastern New Mexico where the bulk of the oil production in New Mexico is obtained; but, without drilling, they can't tell for sure. In short, the Government, by its eminent domain laws—which, incidentally, were made by federal judges and not by Congress—are very unfair, especially in circumstances as in this case. We suspect that the Government intends to hold off any development until it can condemn the state lands and get them at a minimum price; then it would lease them and cash in on any oil and gas development. Its actions have pointed in this direction. Stated simply, this is a complicated chess game being played, and since the shots are being called by the Federal Government, the state is at a complete disadvantage.

It is our recommendation that if the Government does not need the land for exclusive military purposes—that is, that the land can be leased for oil and gas and geothermal purposes without unduly interfering with military purposes—then the state should be allowed to lease its land, and the Government should not be allowed to condemn that particular interest.

An interesting parallel to this case was when the Government took the position that it had to have complete fee simple title in the McGregor Ranch, i.e., that because of military demands it could not allow any grazing or any other use of the lands; and despite the state's and private owners' desire to retain grazing rights, the Government took fee simple title. Within a few years, the Government was leasing all of the grazing rights to third parties. This situation should be brought to the attention of the Governor and to the attention of our Congressional delegation.

The impact statement does not address the foregoing problem which would have an economic impact upon state revenues and, possibly, an impact upon the energy supply. It should be

9



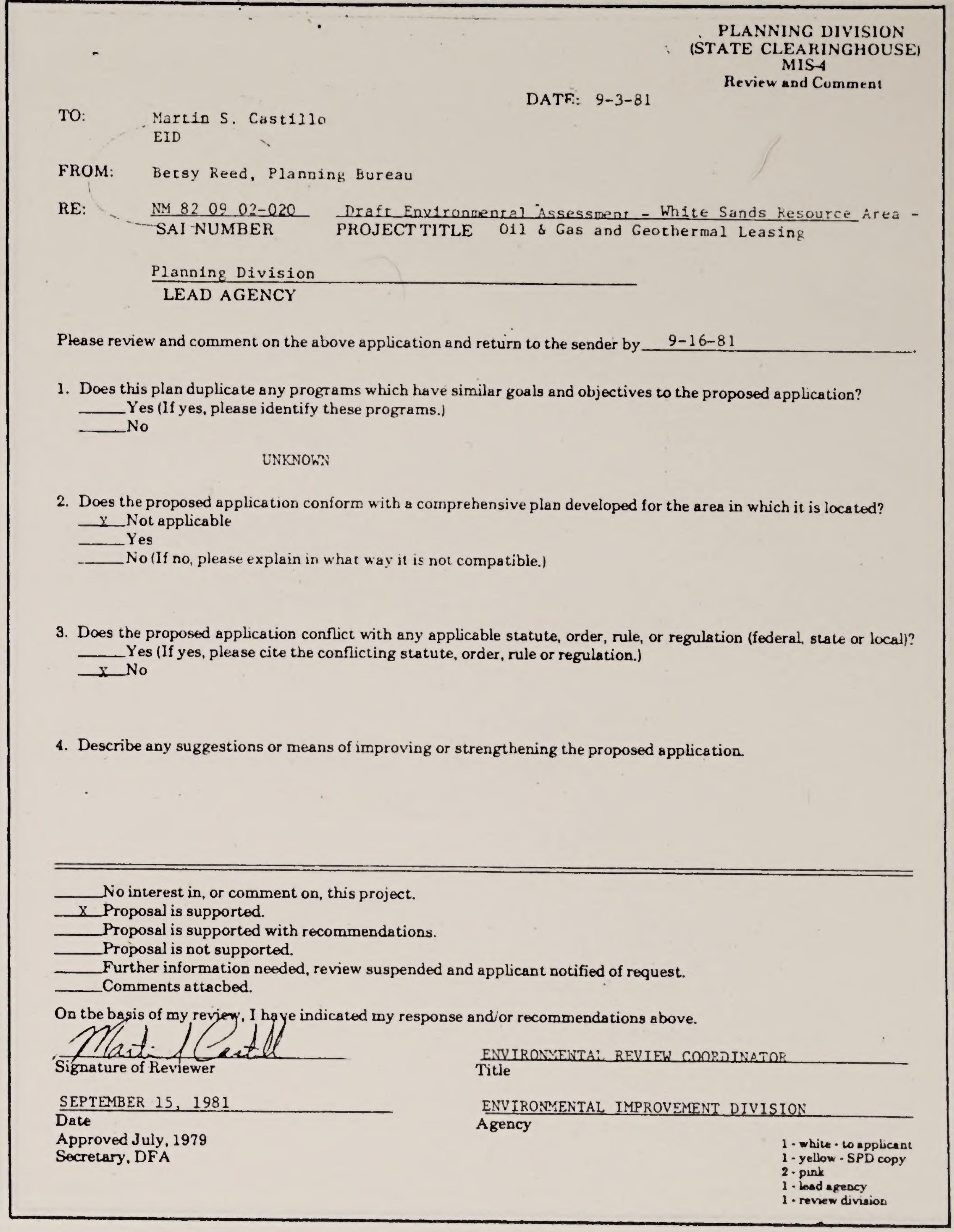
Commissioner Alex J. Armijo -4- September 15, 1981

addressed in the assessment so that some action can be taken to alleviate the problems.

William O. Jordan
WILLIAM O. JORDAN
General Counsel

ljv

9A



PLANNING DIVISION
(STATE CLEARINGHOUSE)
MIS-4
Review and Comment

DATE: 9-3-81

TO: Martin S. Castillo
EID

FROM: Betsy Reed, Planning Bureau

RE: NM 82 09 02-020 — SAI NUMBER
Draft Environmental Assessment - White Sands Resource Area - Oil & Gas and Geothermal Leasing — PROJECT TITLE

Planning Division
LEAD AGENCY

Please review and comment on the above application and return to the sender by 9-16-81.

1. Does this plan duplicate any programs which have similar goals and objectives to the proposed application?
   ______Yes (If yes, please identify these programs.)
   ______No

   UNKNOWN

2. Does the proposed application conform with a comprehensive plan developed for the area in which it is located?
   __x__Not applicable
   ______Yes
   ______No (If no, please explain in what way it is not compatible.)

3. Does the proposed application conflict with any applicable statute, order, rule, or regulation (federal, state or local)?
   ______Yes (If yes, please cite the conflicting statute, order, rule or regulation.)
   __x__No

4. Describe any suggestions or means of improving or strengthening the proposed application.

______No interest in, or comment on, this project.
__x__Proposal is supported.
______Proposal is supported with recommendations.
______Proposal is not supported.
______Further information needed, review suspended and applicant notified of request.
______Comments attached.

On the basis of my review, I have indicated my response and/or recommendations above.

Martin S. Castillo
Signature of Reviewer

ENVIRONMENTAL REVIEW COORDINATOR
Title

SEPTEMBER 15, 1981
Date

ENVIRONMENTAL IMPROVEMENT DIVISION
Agency

Approved July, 1979
Secretary, DFA

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1 - review division

9B

OMB Approval No. 29–R0218

FEDERAL ASSISTANCE

2. Applicant's application
a. Number
b. Date 19 Year Month Day

3. State application identifier
a. Number NM 82 09 02-020
b. Date Assigned 19 81 09 02 (Year month day)

Leave Blank

1. Type Of Action (Mark appropriate box)
☐ Preapplication
☒ Application DEA
☐ Notification Of Intent (Opt.)
☐ Report Of Federal Action

Section I – Applicant / Recipient Data

4. Legal Applicant/Recipient
a. Applicant Name: US Dept. of the Interior
b. Organization Unit: Bureau of Land Management
c. Street/P.O. Box: Las Cruces District Office
d. City: White Sands Resources Area
e. County:
f. State: 1705 N. Valley Dr.
g. Zip Code: 88001
h. Contact Person (Name & telephone no.): Las Cruces NM
Mr. Tom Custer 505-523-5571

5. Federal Employer Identification No.

6. Program (From Federal Catalog)
a. Number 15.000
b. Title Bureau of Land Mangement

7. Title and description of applicant's project

Draft Environmental Assessment
White Sands Resources Area
Oil & Gas and Geothermal Leasing
This environmental assessment (EA) assesses the potential environmental impacts of leasing oil and gas and geothermal resources on BLM administered public lands and lands with federally-owned minerals with the White Sands Resources Area.

8. Type of applicant/recipient
A–State
B–Interstate
C–Substate District
D–County
E–City
F–School District
G–Special Purpose District
H–Community Action Agency
I–Higher Educational Institution
J–Indian Tribe
K–Other (Specify): Federal
Enter appropriate letter ☒ K

9. Type of assistance
A–Basic Grant
B–Supplemental Grant
C–Loan
D–Insurance
E–Other
Enter appropriate letter(s) A

10. Area of project impact (Names of cities, counties, states, etc.)
White Sands, Dona Ana, New Mexico

11. Estimated number of persons benefiting (EA)

12. Type of application
A–New
B–Renewal
C–Revision
D–Continuation
E–Augmentation
Enter appropriate letter A

13. Proposed Funding

a. Federal	$	.00
b. Applicant		.00
c. State		.00
d. Local		.00
e. Other		.00
f. Total	$	.00

14. Congressional Districts Of:
a. Applicant 02
b. Project 02

15. Type of change (For 12c or 12e)
A–Increase Dollars
B–Decrease Dollars
C–Increase Duration
D–Decrease Duration
E–Cancellation
F–Other Specify:
Enter appropriate letter(s) ☐☐☐

16. Project Start Date 19 81 09 30 (Year month day)

17. Project Duration 12 Months

18. Estimated date to be submitted to federal agency 19 81 10 17 (Year month day)

19. Existing federal identification number

20. Federal agency to receive request (Name, city, state, zip code)
Dept. of the Interior BLM Las Cruces District Office

21. Remarks added ☐ Yes ☐ No

Section II – Certification

22. The Applicant Certifies That

a. To the best of my knowledge and belief, data in this preapplication/application are true and correct, the document has been duly authorized by the governing body of the applicant and the applicant will comply with the attached assurances if the assistance is approved.

b. If required by OMB Circular A-95 this application was submitted, pursuant to instructions therein, to appropriate clearinghouses and all responses are attached:

	No response	Response attached
(1) State Planning Office	☐	☐
(2)	☐	☐
(3)	☐	☐

23. Certifying representative
a. Typed name and title
b. Signature
c. Date signed 19 (Year month day)

Section III – Federal Agency Action

24. Agency name

25. Application received 19 (Year month day)

26. Organizational Unit

27. Administrative office

28. Federal application identification

29. Address

30. Federal grant identification

31. Action taken
☐ a. Awarded
☐ b. Rejected
☐ c. Returned for amendment
☐ d. Deferred
☐ e. Withdrawn

32. Funding

a. Federal	$	.00
b. Applicant		.00
c. State		.00
d. Local		.00
e. Other		.00
f. Total	$	.00

33. Action date 19 (Year month day)

34. Starting date 19 (Year month day)

35. Contact for additional information (Name and telephone number)

36. Ending date 19 (Year month day)

37. Remarks added ☐ Yes ☐ No

38. Federal agency A-95 action
a. In taking above action, any comments received from clearinghouses were considered. If agency response is due under provisions of Part 1, OMB Circular A-95, it has been or is being made
b. Federal Agency A-95 Official (Name and telephone number)

424-101

Standard Form 424 Page 1 (10-75)
Prescribed by G.S.A. Federal Management Circular 74-7

(ALSO PLEASE COMPLETE REVERSE SIDE)

9C

PLANNING DIVISION
(STATE CLEARINGHOUSE)
MIS-4
Review and Comment

DATE: 9-3-81

TO: Charles Wood

FROM: Betsy Reed, Planning Bureau

RE: NM 82 09 02-020 SAI NUMBER — Draft Environmental Assessment -- Oil and Gas and Geothermal leasing in the White Sands Resource Area PROJECT TITLE

Planning Division
LEAD AGENCY

Please review and comment on the above application and return to the sender by 9-16-81

1. Does this plan duplicate any programs which have similar goals and objectives to the proposed application?
______ Yes (If yes, please identify these programs.)
__X__ No

2. Does the proposed application conform with a comprehensive plan developed for the area in which it is located?
______ Not applicable
______ Yes
______ No (If no, please explain in what way it is not compatible.)

I don't know

3. Does the proposed application conflict with any applicable statute, order, rule, or regulation (federal, state or local)?
______ Yes (If yes, please cite the conflicting statute, order, rule or regulation.)
__X__ No not to my knowledge

4. Describe any suggestions or means of improving or strengthening the proposed application.

9C-1 Page 2 should be changed to state that geothermal operations are taking place at [illegible] [illegible] & the [illegible] [illegible] [illegible] Center and that several new applications are in the planning stage.

______ No interest in, or comment on, this project.
______ Proposal is supported.
______ Proposal is supported with recommendations.
______ Proposal is not supported.
______ Further information needed, review suspended and applicant notified of request.
__X__ Comments ~~attached~~. above

On the basis of my review, I have indicated my response and/or recommendations above.

Signature of Reviewer

Title [illegible]

4-14-81
Date

(EMD)
Agency

Approved July, 1979
Secretary, DFA

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9 C-1 See Errata section, Chapter 1, page 2.

9D

PLANNING DIVISION
(STATE CLEARINGHOUSE)
MIS-4
Review and Comment

DATE: 9-3-81

TO: S.E. Reynolds
State Engineer

FROM: Betsy Reed, Planning Bureau

RE: NM 82 09 02-020 Draft Environmental Assessment - White Sands Resource Area - Oil & Gas and Geothermal Leasing
SAI NUMBER PROJECT TITLE

Planning Division
LEAD AGENCY

Please review and comment on the above application and return to the sender by 9-16-81.

1. Does this plan duplicate any programs which have similar goals and objectives to the proposed application?
______Yes (If yes, please identify these programs.)
______No

Do not know

2. Does the proposed application conform with a comprehensive plan developed for the area in which it is located?
______Not applicable
______Yes
______No (If no, please explain in what way it is not compatible.)

Do not know

3. Does the proposed application conflict with any applicable statute, order, rule, or regulation (federal, state or local)?
______Yes (If yes, please cite the conflicting statute, order, rule or regulation.)
______No

Do not know

4. Describe any suggestions or means of improving or strengthening the proposed application.

See attached

______No interest in, or comment on, this project.
______Proposal is supported.
______Proposal is supported with recommendations.
______Proposal is not supported.
______Further information needed, review suspended and applicant notified of request.
__X__Comments attached.

On the basis of my review, I have indicated my response and/or recommendations above.

Signature of Reviewer

Chief, Water Rights Bureau
Title

9/15/81
Date

Water Resources Division
Agency

Approved July, 1979
Secretary, DFA

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1 - review division

9D

Comments to Draft Environmental Assessment - Oil & Gas and Geothermal Leasing in the White Sands Resource Area.

Although I found no discussion in the Draft Environmental Assessment regarding the proposed appropriation of surface water it may be well to note that the State Engineer has jurisdication over all of the surface waters of the state. A permit to appropriate the surface waters is required except for stock ponds which have a capacity of 10 acre feet of water or less.

On page 23 it is stated "A formal water right must be obtained from the State Engineer before developing a water well in any declared underground water basin". **9D-1** It may not be clear that a permit would be required from the State Engineer to drill a geothermal well from which water, either in a gaseous or liquid state, will be withdrawn from geologic formations within a declared underground water basin for the purpose of utilizing the thermal energy.

9 D-1 See revised page 25 of the draft EA.

9E

PLANNING DIVISION
(STATE CLEARINGHOUSE)
MIS-4
Review and Comment

DATE: 9-3-81

TO: Harold Olson
Game and Fish Department

FROM: Betsy Reed-Planning Bureau

RE: NM 82 09 02-020 — SAI NUMBER
Draft Environmental Assessment - Oil and Gas and Geothermal Leasing in the White Sands Resource Area — PROJECT TITLE

Planning Division
LEAD AGENCY

Please review and comment on the above application and return to the sender by 9-16-81.

1. Does this plan duplicate any programs which have similar goals and objectives to the proposed application?
   ____ Yes (If yes, please identify these programs.)
   _X_ No

2. Does the proposed application conform with a comprehensive plan developed for the area in which it is located?
   ____ Not applicable
   _X_ Yes
   ____ No (If no, please explain in what way it is not compatible.)

3. Does the proposed application conflict with any applicable statute, order, rule, or regulation (federal, state or local)?
   ____ Yes (If yes, please cite the conflicting statute, order, rule or regulation.)
   _X_ No

4. Describe any suggestions or means of improving or strengthening the proposed application.

____ No interest in, or comment on, this project.
____ Proposal is supported.
_X_ Proposal is supported with recommendations.
____ Proposal is not supported.
____ Further information needed, review suspended and applicant notified of request.
____ Comments attached.

On the basis of my review, I have indicated my response and/or recommendations above.

Signature of Reviewer

Title: Chief Planning

Date: 9/10/81

Agency: Game & Fish

Approved July, 1979
Secretary, DFA

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1 - lead agency
1 - review division

9F

PLANNING DIVISION
(STATE CLEARINGHOUSE)
REVIEW CERTIFICATION FORM

MIS 6

STATE PLANNING DIVISION
DEPT. OF FINANCE & ADMINISTRATION
505 DON GASPAR
SANTA FE, NEW MEXICO 87503
(505) 827-2073

TO: Mr. Tom Custer
BLM Las Cruces District Office

DATE: 9/15/81

SUBJECT: ☐ PRELIMINARY REVIEW ☐ FINAL REVIEW ☐ STATE/AREA PLAN ☒ ENVIRONMENTAL IMPACT STATEMENT

PROJECT TITLE: Draft EA White Sands Resource Area-Oil& Gas and Geothermal Leasing

APPLICANT: Bureau of Land Management - Las Cruces District Office

SAI NUMBER: NM 82 09 02-020 FEDERAL CATALOG NUMBER: 155.000

FEDERAL AGENCY: Bureau of Land Management

PROPOSED FUNDING (PER 424 FORM)	AMOUNT
FEDERAL	$
APPLICANT	
STATE	
LOCAL	
OTHER	
TOTAL	

FOR FINAL APPLICATION ONLY:

REVIEW RESULTS:

____ The application is supported.
____ The application is not in conflict with State, Areawide or Local plans.
_X_ Comments are attached for submission with this application.

Betsy Reed
LEAD AGENCY REVIEW COORDINATOR

AGENCY

TO THE APPLICANT:

You may now submit your application package, this form and all review comments to the Federal or State Agency(s) from whom action is being requested.

Please notify the Planning Division (Clearinghouse) of any changes in this project. Refer to the SAI number on ALL correspondence pertaining to this project.

STATE CLEARINGHOUSE

9/16/81
DATE

STATE PLANNING DIVISION DIRECTOR

9/16/81
DATE

Approved July, 1979
Secretary, DFA

White: to Applicant.
Green: for Federal Agency.
Canary: SPD Copy.
Pink: Lead Agency.
Goldenrod: Federal Funds Tracking.

9F

STATE OF NEW MEXICO
DEPARTMENT OF
FINANCE AND ADMINISTRATION
STATE PLANNING DIVISION

BRUCE KING
GOVERNOR

KATHLEEN R. MARR
SECRETARY

505 DON GASPAR AVENUE
SANTA FE, NEW MEXICO 87503
(505) 827-2073
(505) 827-5191
(505) 827-2108

ANITA HISENBERG
DIRECTOR

JOE GUILLEN
DEPUTY DIRECTOR

September 15, 1981

Tom Custer
Bureau of Land Management
Las Cruces District Office
White Sands Resource Area
P.O. Box 1420
Las Cruces, New Mexico 88001

Dear Mr. Custer:

Enclosed are copies of comments that we have received on the Draft Environmental Assessment of Oil and Gas and Geothermal Leasing in the White Sands Resource Area through the A-95 Clearinghouse from other state agencies. Due to the short time allotted for review, I am still lacking responses from various state agencies. Any late comments that I do receive will be sent directly to you.

As to the impacts of oil, gas and geothermal development in the White Sands Resource Area, it is obvious from the environmental assessment that impacts **9F-1** on water quality and quantity could be very severe. It is mentioned that development "would reduce the availability of suitable water for wildlife, livestock and humans," and that "in the long term, water supplies could be significantly reduced." If this, then, will be the result of development, then more precautions must be taken. In the environmental assessment mention is made of 1) improperly lined evaporation and reserve pits allowing seepage that leads to discharge of brackish and toxic waters into surface waters, 2) Improper drilling practices that can fracture impermeable zones below and above aquifers which permits water resources to be lost or reduced through vertical drainage, and 3) Improper injection of brackish waste water which can contaminate fresh water aquifers. **9F-2** These are mistakes resulting from poor management that should not occur. Do you propose any regulations for such poor practices so as to alleviate these sorts of problems?

9F-3 As concerns wildlife, I suggest you coordinate with the Game and Fish Department which has, in its Comprehensive Plan, identified critical habitat areas for deer and elk. Arrangements should be made for protection of these areas, especially during fawning, calving, and lambing periods. In answer

9 F-1 See revised page 25 of the draft EA.

9 F-2 See revised page 25 of the draft EA. Standard operating procedures (both State of New Mexico and Federal) are sufficient to provide protection to water resources. The possibility of accidents, mistakes, and poor management cannot be overcome by more regulations.

9 F-3 The New Mexico Department of Game and Fish was contacted to delineate herd units as shown in Figure 4 of the draft EA.

9F

Tom Custer
September 15, 1981
Page Two

9F-4 to the severe impacts of indiscriminate shouting, poaching, and increased off-road vehicle activity upon wildlife habitat, wouldn't the solution be to keep these new roads closed to the public?

Concerning mitigating measures for impacts of oil and gas development, those presented by the Bureau of Indian Affairs in the Environmental Assessment of Oil and Gas Development on the Ute Mountain Ute Reservation, are very sound and comprehensive. Many of these, in addition to those proposed for the White Sands Resource Area, would make for a more acceptable proposal for oil, gas and geothermal development in the White Sands Resource Area.

9F-5 Lastly, it isn't clear in the environmental assessment whether there would be any reclamation measures taken.

Thank you for including us in the review of this environmental assessment. It was a pleasure reading such a well organized and well written document.

Sincerely,

Betsy Reed

Betsy Reed
Planning Bureau

BR:jeh

Enclosures

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9 F-4 If a site-specific environmental review reveals potentially severe impacts to wildlife or wildlife habitat, mitigating measures can be developed at that time to eliminate or lessen those impacts.

See revised page 1 of the draft EA and Appendix A of the draft EA.

9 F-5 This regional leasing EA is not intended to develop reclamation measures. Reclamation measures are developed site-specifically whenever the lessee proposes to conduct surface-disturbing activities.

See revised page 1 of the draft EA.

10

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
Conservation Division, MS-92
345 Middlefield Road
Menlo Park, CA 94025

SEP 15 1981

Memorandum

To: Tom Custer, Bureau of Land Management, White Sands Resource Area, Las Cruces, New Mexico

From: Acting Deputy Conservation Manager, Geothermal

Subject: Review of Draft Oil & Gas and Geothermal Leasing EA in the White Sands Resource Area

Enclosed please find this office's comments on the discussion of geothermal operations, impacts and mitigation in the Oil and Gas and Geothermal Leasing EA for the White Sands Area.

While this EA is general in nature in its discussion of geothermal development, it has basically avoided the issue of direct use projects and power plants, their impacts, and possible mitigation. We will be happy to help in developing appropriate text if necessary.

If this office can be of any further help in answering any of your questions, or providing additional input to the EA, please do not hesitate to call. Your contact in this office is Richard Hoops at FTS 467-2848.

William F. Isherwood

Enclosure

10

10-1 Pg. 1, para. 3 - It may be helpful at this point to discuss the Geological Survey's role in processing post-lease EA's, and describe the various types of Plans of Operation, i.e., Plan of Exploration, Plan of Development, Plan of Production, Plan of Injection, and Plan of Utilization.

10-2 Pg. 3, para. 2 - Suggest rewording last line to "resources on public lands would not be discovered."

10-3 Pg. 4, para. 3 - The depth of temperature gradient wells range from 500 to 2,000 feet.

para. 7 - The terminology of "deep" and "shallow" wells is a bit inconsistent. "Deep" wells are wells generally deeper than 2,000 feet, permitted under a Plan of Operation. "Shallow" wells are wells permitted as temperature gradient holes, and generally are less than 2,000 feet deep, although they may be up to 3,000 feet deep.

Pg. 5, para. 5 - This paragraph should also mention injection wells and pipelines, the various types of power plants which may be used, and also direct use of geothermal energy, i.e., space heating.

10-4 A power plant is typically centrally located from production wells. Therefore, the area from which geothermal brine is produced is usually several square miles per plant. A spacing of one conventional (110 MW) plant per square mile is unlikely outside the Geysers-Calistoga steamfield.

Pg. 6, para. 2 - During geothermal exploration, wells are flow tested into a lined sump. Surface discharge of geothermal fluids is not permitted unless chemical analysis of the fluid indicates it is of acceptable quality. The well casing requirements do not permit the injection of geothermal fluids into near surface groundwater, but require injection into the geothermal reservoir which is usually several thousand feet deep.

Injection is always employed for power plants or large scale direct uses. This is required not only for environmental reasons, but also to maintain reservoir pressure and recharge, thereby prolonging the commercial life of the reservoir.

Pg. 7, para. 3 - All oil and gas, and geothermal leases require the protection of archaeological resources. No surface disturbing activities may commence until the operator has obtained an archaeological clearance. Therefore, we suggest deleting this mitigation since it is not specific to one area of operations. Locating cultural resources by either legal description or on publically available maps, except for very generalized descriptions, increases the potential for vandalism. 10-5

10-6 Pg. 16, para. 1 - The Air Quality Section is missing an Impact and Mitigation Section. Will geothermal operations significantly impact air quality, and if so, how should such an impact be mitigated?

para. 7 and 8 - Several geological hazards are mentioned. How are these impacts to be mitigated?

10-1 See revised page 1 of the draft EA.

10-2 See Errata section, Chapter 1, page 3.

10-3 See Errata section, Chapter 1, page 4.

10-4 See Errata section, Chapter 1, page 5.

10-5 The area in question has an extremely high site-density with important archaeological values. It is highly unlikely that lease operations could occur without seriously affecting archaeological values. The purpose of this lease stipulation is to warn the lessee that lease operations could be prohibited or severely restricted.

10-6 Climate, air quality, topography, and geologic hazards were combined into the section titled Physical Setting in the draft EA. Admittedly this EA could have addressed all of the possible impacts on air quality and all of the possible mitigating measures. However, the mitigating measures developed during site-specific environmental reviews and the standard operating procedures (Federal and state air quality regulations for example) would be adequate for environmental protection within the WSRA.

10

Pg. 20, para. 1 - This paragraph discusses mitigation and so should be included in the Mitigation Section.

10-7 | Pg. 25, para. 4 - The Water Resources Section has no mitigation portion. The impacts mentioned are usually mitigated.

para. 6 - Geothermal fluid generally is obtained from a reservoir several thousand feet below, and usually isolated from, near surface aquifers. Wells are fully cased to prevent groundwater contamination. Therefore, it is unlikely geothermal development will cause a reduction of groundwater supplies.

para. 7 - As described above, it is very unlikely that geothermal development will significantly reduce water supplies.

10-8 | Pg. 31, para. 5 - Post lease EA's and the Geological Survey's role in geothermal regulation have not been mentioned before. Please see the comment for page 1.

10-9 | line 6 - Suggest rewording to "accidents may still occur."

10-10 | Pg. 32, para. 5, line 2 - Suggest rewording to "geothermal operations may result in . . ."

10-11 | line 3 - Suggest rewording to "production operations may also result in . . ."

Pg. 35, figure 6 - Wording describing the various VRM Classes is vague to someone not familiar with the classification. Please use more direct wording in describing the classification.

10-12 | Pg. 36, para. 1 - No Class I VRM areas are shown in figure 6, therefore, how can the Sacramento Escarpment meet the necessary criteria to be identified as a potential area of critical environmental concern? What VRM class does the escarpment possess? It is rather unlikely drilling will occur on or adjacent to such a large escarpment. Even when an escarpment is due to a fault of interest to developers, wells are sited away from the base of the escarpment to allow penetration of the fault zone in the geothermal reservoir.

Pg. 43, para. 6 - The statement "short-term development and production operations would result in sacrificing total protection of the environment in favor of the economic benefits associated with energy production" should be deleted. This statement is an over reaction to the impacts of the proposal, and would indicate a bias of the preparers against energy development, rather than the neutral and objective view required by regulations. Some environmental change will occur, as with any other use of the resources, such as grazing, but environmental protection is not abandoned.

Pg. 60 - The legend of each map should specify which mitigation is presented so the reader does not have to turn to the front of the EA for the information. Map 3 should be deleted since it facilitates pot hunting.

10-7	See revised page 25 of the draft EA.
10-8	See response to comment 10-1.
10-9	See Errata section, Chapter 1, page 31.
10-10	Based on Las Cruces District Office experience, operations normally do lead to the discovery of more cultural sites. Hence the term "would".
10-11	See Errata section, Chapter 1, page 32.
10-12	Unfortunately the VRM classification system is somewhat confusing when summarized as in the draft EA. See Errata section, Chapter 1, page 36 and revised page 57 of the draft EA.

MODIFICATIONS AND CORRECTIONS TO THE DRAFT EA

The modifications and corrections section contains revisions made to the Draft EA based on new or more complete information or errors and omissions identified through the public review process.

Errata

The following changes in the Draft EA are of editorial nature with some minor changes and corrections to the text. These changes are to be incorporated into the Draft EA.

The numerical sequence of page numbers is incorrect from page 10 and on. Page 11 is intentionally missing. There are two page 34's. Pages 61 and 62 should be changed to 76 and 77, respectively.

TABLE OF CONTENTS

Appendix E. Change Wilderness Stipulations to Wilderness Protection Stipulation.

Figure 6. Change Visual Resource Management to Visual Resource Management Classes. Add page number 44.

References. Change page number from 61 to 76.

FIGURES

Figure 1. Change WSMR Extension Area to WSMR Safety Evacuation Area.

Figure 6. Under Class III change elements may evident to elements may be evident.

Figures 1, 4, 5, and 6. The boundaries for White Sands Missile Range are incorrect. Corrected boundaries are shown on revised Figure 1.

CHAPTER 1

Page 2, paragraph 1, line 2. Change 33 percent or about 2,269,000 acres to 25 percent or about 1,754,000 acres.

Page 2, paragraph 1, line 4. Change 37 percent or about 2,601,000 acres to 30 percent or about 2,086,000 acres.

Page 2, paragraph 2, line 2. Change production within the WSRA to production on Federal lands within the WSRA.

Page 2, paragraph 2, line 3. Add the following sentence: Direct use geothermal operations (space heating) are occurring in Truth or Consequences at Carrie Tingley Hospital and the Truth or Consequences Senior Citizen's Center.

MODIFICATIONS AND CORRECTIONS TO THE DRAFT EA

The modifications and corrections section contains revisions made to the Draft EA based on new or more complete information or errors and omissions identified through the public review process.

ERRATA

The following changes to the Draft EA are of editorial nature with some minor changes and corrections to the text. These changes are to be incorporated into the Draft EA.

The numerical sequence of page numbers is incorrect from page 70 and on. Page 71 is inadvertently missing. There are two page 78's. Pages 77 and 78 should be changed to 76 and 77, respectively.

TABLE OF CONTENTS

Appendix I. Change Wilderness Consultation to Wilderness Protection Stipulation.

Figure 6. Change Visual Resource Management to Visual Resource Management Classes. Add page number 82.

References. Change page number from 83 to 78.

FIGURES

Figure 1. Change WSMR Extension Area to WSMR Safety Evacuation Area.

Figure 6. Under class III change elements may attract to elements may be evident.

Figures 1, 4, 5, and 6. The boundaries for White Sands Missile Range are incorrect. Corrected boundaries are shown on revised Figure 1.

CHAPTER I

Page 2, paragraph 1, line 2. Change 75 percent or about 2,000,000 acres to 68 percent or about 1,744,096 acres.

Page 2, paragraph 1, line 3. Change 25 percent or about 1,100,000 acres to 32 percent or about 1,097,000 acres.

Page 2, paragraph 1, line 2. Change production within the WSMR [illegible] to Federal lands within the WSMR.

Page 3, paragraph 1, line 4. Add the following sentence: [illegible]

Page 3, paragraph 1, line 4. Change goethermal to geothermal.

Page 3, paragraph 2, line 3. Change would be discovered to would not be discovered.

Page 4, paragraph 3, line 1. Change first sentence to read as follows: The depth of temperature gradient wells ranges from 500 to 2000 feet.

Page 5, paragraph 5, line 10. Delete sentence beginning "Therefore, power plant spacing . . ."

Page 7, top of page. Change Mitigating Measures Developed from the Draft EA to Mitigating Measures Known Before Preparation of EA.

Page 10, paragraph 1, line. Change Extension area to Safety Evacuation Area.

Page 12, legal description at bottom of page. Change Section 28: E¼NE¼, NE¼SE¼ to Section 29: E½NE¼, NE¼SE¼.

CHAPTER 2

Page 15, top of page. Change AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES to AFFECTED ENVIRONMENT, IMPACTS AND MITIGATING MEASURES.

Page 20, paragraph 2. Reword as follows: Site-specific mitigating measures will limit geophysical exploration to existing roads and trails where possible and blading of off-road routes will not be permitted, unless blading is necessary for vehicles to travel access rough or steep routes.

Page 23, paragraph 1, line 2. Change in arid in semiarid to in arid or semiarid.

Page 25, paragraph 2, line 4. Change breakage of pit wells to breakage of pit walls.

Page 26, paragraph 1, line 11. Change (BLM, 1971) to (USDI, 1970).

Page 29, paragraph 2, line 4. Change (LeBlanc and Whalen, 1979) to (LeBlanc and Whalen, 1980).

Page 31, paragraph 5, line 6. Change accidents would still occur to accidents could still occur.

Page 33, last paragraph, line 1. The Tularosa River . . . .

Page 32, paragraph 5, line 3. Change production operations would . . . to production operations may . . .

Page 36, paragraph 1, line 2. Change resource area to WSRA.

Page 36, paragraph 1. Reword last sentence to read: The escarpment does meet the necessary criteria to be identified as a potential area of critical environmental concern *because it has outstanding scenic quality and is scarce within the region*.

Page 40, paragraph 4, line 2. Change *ten percent from 1930* to *ten percent from 1970*.

Page 40, paragraph 5, line 4. Change *Truth of Consequences* to *Truth or Consequences*.

Page 40, paragraph 5, line 5. Change *in migration* to *in-migration*.

Page 41, paragraph 1, line 5. Change *migration from Mexico immigrants* . . . to *migration from Mexico* - *immigrants*.

Page 41, paragraph 1, line 6. Change *ninteenth* to *nineteenth*.

Page 41, paragraph 1, line 7. Change *econically* to *economically*.

Page 43, last paragraph, line 2. Change *in favor or* to *in favor of*.

CHAPTER 3

Page 45, under New Mexico State Government. Delete *Mescalero Indian Tribe* and put under Regional and Local Agencies, page 46.

Page 45, under New Mexico State Government. Delete *Southern Rio Grande Council of Governments* and *Southeastern New Mexico Economic Development District*. These are listed under Regional and Local Agencies, page 46.

Page 46, under Companies, Groups, Organizations. Change *Prarie Dawgs Motorcycle Club* to *Prairie Dawgs Motorcycle Club*.

Page 46, bottom of page. Change *number of copes* to *number of copies*.

Page 47, Candace Ojala, under Education. Change *B.A., Archaeology* to *B.A., Anthropology*, *Art History*.

Page 48, top of page. Change *Contributers* to *Contributors*

GLOSSARY

Page 49, Glossary. Add the following two terms and definitions: *Area of Critical Environmental Concern (ACEC) for scenic values. Areas within the public lands where special management attention is required (when such areas are developed or used, or where no development is required) to protect or prevent irreparable damage to the scenic values.*

Interim Management Policy. Those guidelines under which wilderness study areas will be managed until Congress decides whether they should be designated as wilderness.

APPENDICES

Page 50 and 51. Wherever FWS occurs, change to USFWS.

Page 50, paragraph 1, line 7. Change adminstered to administered.

Page 51, paragraph 2, line 7. Change file an application to file a plan of operations.

Page 52, add to list: Various State of New Mexico Agencies' Regulations (State Engineer, Environmental Improvement Division, Oil Conservation Division).

Changes to the Text

As a result of changes due to public comment, other agency review, and internal review, the following Draft EA pages have been reproduced in full to reflect significant changes in the text. The changes in the text are highlighted.

Draft EA page	Final EA Page
p. 1	31
p. 25	33
p. 57	35
Figure 1	36
Appendix F (Mitigating Measure #5)	37

CHAPTER 1

PROPOSED ACTION AND ALTERNATIVES

INTRODUCTION

The leasing of oil & gas and geothermal resources on public lands is a major function of the Bureau of Land Management (BLM). Activities related to leasing, such as exploration, development, and production, have an effect upon the environment. The National Environmental Policy Act (NEPA) of 1969 requires that all activities affecting the land and resources under BLM jurisdiction be analyzed for potential environmental impacts.

This environmental assessment (EA) addresses BLM administered public lands and BLM administered mineral reserved lands within the White Sands Resource Area (WSRA), Las Cruces District. The WSRA consists of Sierra and Otero Counties. Withdrawn lands such as White Sands Missile Range and Ft. Bliss Military Reservation and other lands closed to leasing are not addressed in this EA.

The prime function of this regional leasing EA is to identify areas where present knowledge indicates that potential resource conflicts would be significant enough to either preclude leasing or restrict lease operations. As a result, the mitigating measures developed from this EA will be attached to leases as special stipulations. This EA is not intended to identify all of the possible environmental impacts associated with leasing. Nor is it intended to identify all of the possible ways in which to mitigate those impacts. In the future, if analysis of additional resource data indicates that leasing in certain areas should not be allowed or that lease operations should be restricted, this EA can be amended to reflect that new information.

The issuance of a lease does not give the lessee the right to develop at will. After a lease is issued, all subsequent activities on that leasehold are authorized by the U.S. Geological Survey (USGS). Before approval of any surface disturbing activities, the USGS must prepare a site-specific environmental review (in consultation with BLM) of the lessee's proposed plan of operations. It is this site-specific assessment and on-the-ground field inspection which identify potential impacts and the measures to be required of the lessee to mitigate those impacts. This environmental review process and the development of mitigating (and reclamation) measures is repeated for each successive development phase in an oil & gas or geothermal program (i.e., exploration drilling, development, production and abandonment). A summary of the environmental review process is shown in Appendix A.

The common types of reclamation measures developed from the site-specific environmental review include reshaping, reseeding, and location of proposed sites and access routes to avoid or lessen impacts to other resource values. There are numerous other existing mitigating measures which can be recommended depending on site location and the nature of the proposed activities.

Additionally, there are numerous standard operating procedures which stipulate specific practices and methods to be followed when oil & gas and geothermal operations are conducted on federal lands. Sources of these standard operating procedures are listed in Appendix B.

This EA also serves as an amendment to the land-use plan prepared by BLM in 1974 for what was known at that time as the Mesa Planning Unit. The Mesa Planning Unit contained about 715,000 acres of BLM administered public lands and was located in the southeastern portion of Otero County. The land-use plan contains a management decision relating to oil & gas leasing. That decision states that leasing will not be allowed in the following areas: (1) proposed Cornudas Mountain primitive area, (2) certain lands in the Guadalupe Mountains that have wilderness values and (3) the Alkali Flats which have wildlife values.

The tracts of land in the proposed Cornudas Mountain primitive area and in the Guadalupe Mountains were intensively inventoried in 1980 and 1981, respectively. Both were found to lack the wilderness requirements necessary for being classified as wilderness study areas. Both areas are now open to leasing.

The Alkali Flats area was identified as having value as a resting place for the sandhill crane. Subsequent analysis during the preparation of this draft EA revealed that the wildlife values at Alkali Flats were not significant enough to preclude leasing. If sandhill crane populations do increase significantly in the area, the Alkali Flats' value as wildlife habitat can be reevaluated and appropriate mitigating measures can be developed to protect that habitat.

BLM is also responsible for the issuance of leases on lands administered by other federal agencies, such as the U.S. Forest Service and the Bureau of Reclamation. These agencies recommend environmental protection stipulations which the BLM includes when issuing the leases. Forest Service lands within the WSRA include the Gila National Forest in northeastern Sierra County and the Lincoln National Forest in eastern Otero County. Lands administered by the Bureau of Reclamation include acquired and withdrawn lands near Caballo and Elephant Butte Reservoirs.

BACKGROUND

Preparation of this EA is based upon the following considerations: oil & gas exploration is expected to increase significantly in the WSRA; the existing regional EA (USDI, 1973) is in need of revision; and a regional geothermal EA that includes the entire WSRA is needed.

containing unstable soils and where the potential for natural revegetation is limited, siltation could have a long-term impact on surface water quality. (See discussion of impacts in Soils and Vegetation section.)

Accidents (i e., fires, explosions, well blowouts, spills, and leaks) could lead to major contaminations and to higher temperatures when oil or geothermal fluids enter surface waters. Seepage from improperly lined evaporation and reserve pits or breakage of pit walls could lead to discharge of brackish and toxic waters into surface waters. Rain or flooding could compound the impacts by moving toxic substances into drainages where they could migrate down to the water table.

Surface disturbance and accidental spills or leaks from reserve pits could lead to loss or degradation of the beneficial values of floodplains and wetland-riparian areas. Site-specific environmental review would be required to evaluate the effects that the proposed action would have on floodplains and wetland-riparian areas.

Groundwater supplies could be depleted or reduced by drilling of wells. Improper drilling practices could fracture impermeable zones below and above aquifers, permitting these water resources to be lost or reduced through vertical drainage. Well drilling itself could also require large quantities of water, especially if porous and permeable formations are encountered. Oil & gas and geothermal production methods which require the injection of additional water into the reservoir could deplete groundwater supplies. Improper injection of brackish waste water could contaminate fresh water aquifers.

As described in Chapter 1, mitigation of environmental impacts is usually a result of an on-the-ground field inspection and site-specific environmental review. In addition, standard operating procedures are incorporated to ensure that good management practices are followed, and that impacts on water quantity and quality are minimized. Accidents are a recognized possibility over and above the standard management practices and contingency plans are required to reduce the severity of impacts should an accident occur.

A beneficial impact of oil & gas and geothermal exploration would be the use of abandoned wells for additional water sources, particularly for wildlife and livestock.

Adverse Impacts Which Cannot be Avoided

The amount of water consumed as a result of oil & gas and geothermal development and production operations would be lost to other uses and a reduction in the total water supply could result. However, the administration of water for beneficial use is handled by the State Engineer's Office, and the individual oil & gas and geothermal companies would be responsible for securing water rights.

Relationship Between Short-Term Uses and Long-Term Productivity of the Environment

As growth continues in the WSRA, the demand for water will continue to increase. Improper management practices during development and production operations could reduce water quantity and quality. However, significant long-term impacts would not be expected to occur. New water supplies could be discovered through test drilling.

APPENDIX D

VISUAL RESOURCE MANAGEMENT

The Bureau's Visual Resource Management (VRM) program has two phases: (1) determination of permanent or interim VRM classes; and (2) determination of contrast ratings for proposed projects. The rating process allows the evaluator to describe the existing landscape features of land surface, vegetation, and existing structures and the impact that an activity would have on their basic elements of form, line, color, and texture. This contrast rating not only provides an opportunity to evaluate the visual impact of the proposed action but also serves as a guide to identify potential mitigating measures.

The significance of impacts can be evaluated by comparing contrast rating scores (30 being the maximum possible score - indicating the most severe visual impacts), with minimal standards for a prescribed VRM class, or the scenic value for an area of critical environmental concern. These standards are:

Class I

The degree of contrast for any one element may not exceed a weak degree of contrast and the total contrast rating for any feature may not exceed 10.

Area of Critical Environmental Concern for Scenic Values

The degree of contrast for any one element should not exceed a moderate degree and the total contrast rating for any feature may not exceed 10.

Class II

The degree of contrast for any one element should not exceed a moderate degree and the total contrast rating for any feature may not exceed 12.

Class III

The degree of contrast for any one element should not exceed a moderate value and the total contrast rating for any feature may not exceed 16.

Class IV

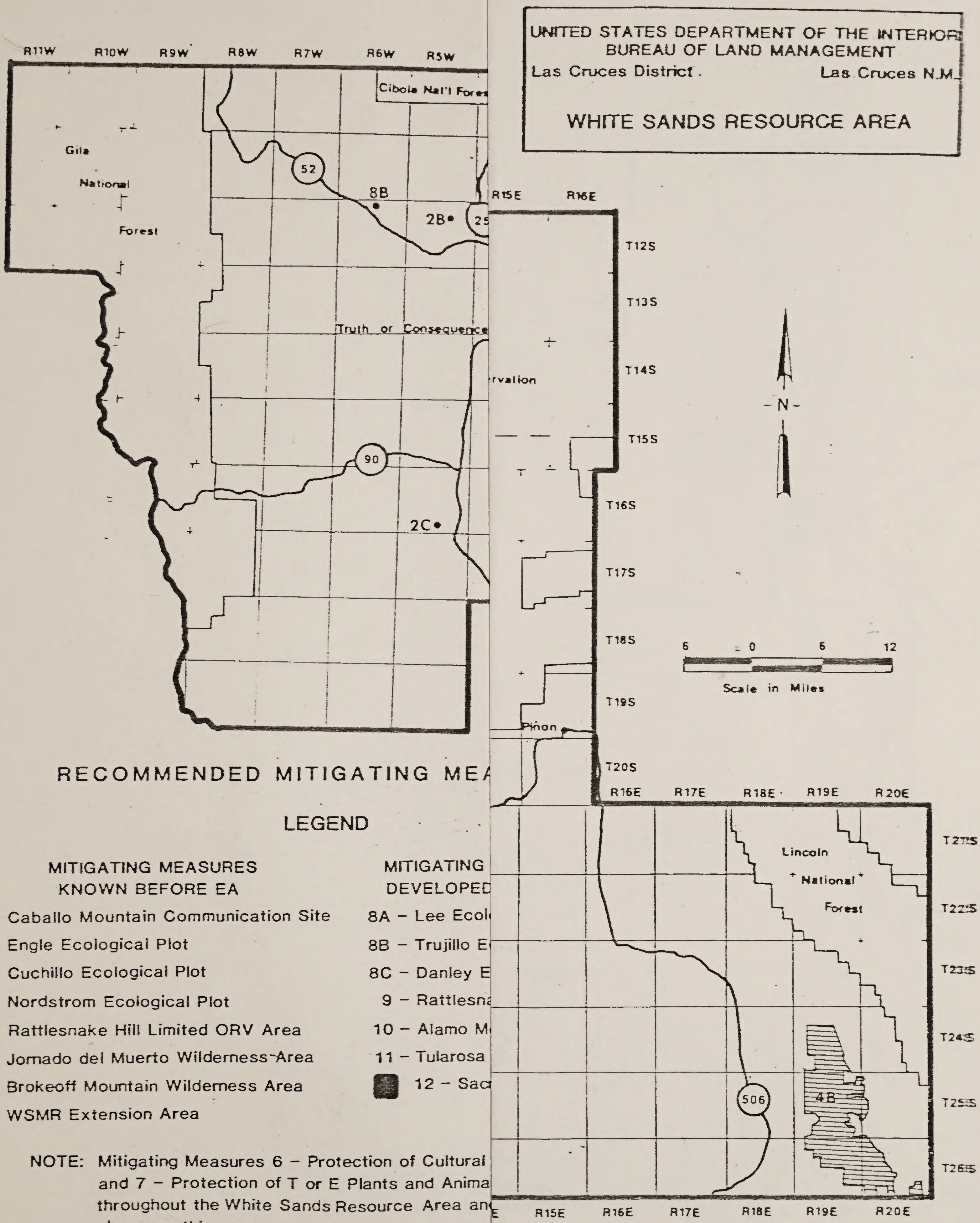
The total contrast rating for any feature should not exceed 20.

Class V

An interim classification for an area in need of rehabilitation. Based upon its indicated potential VRM class, the feature must meet the appropriate degree of contrast for the intended class.

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
Las Cruces District. Las Cruces N.M.

WHITE SANDS RESOURCE AREA



RECOMMENDED MITIGATING MEA

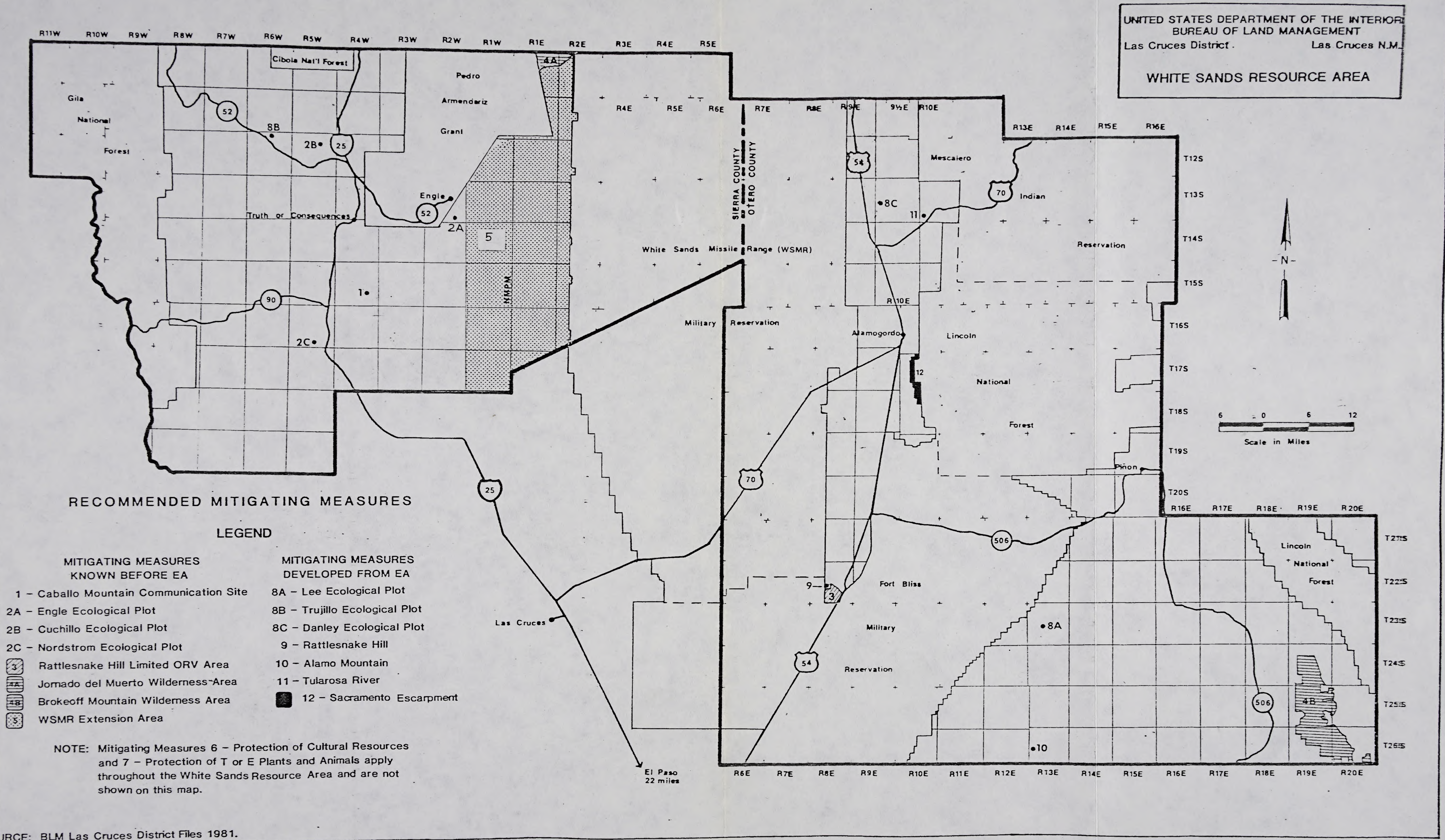
LEGEND

MITIGATING MEASURES KNOWN BEFORE EA	MITIGATING DEVELOPED
1 – Caballo Mountain Communication Site	8A – Lee Ecol
2A – Engle Ecological Plot	8B – Trujillo E
2B – Cuchillo Ecological Plot	8C – Danley E
2C – Nordstrom Ecological Plot	9 – Rattlesna
▨ 3 Rattlesnake Hill Limited ORV Area	10 – Alamo M
▤ 4A Jornado del Muerto Wilderness Area	11 – Tularosa
▤ 4B Brokeoff Mountain Wilderness Area	■ 12 – Sac
⬚ 5 WSMR Extension Area	

NOTE: Mitigating Measures 6 – Protection of Cultural and 7 – Protection of T or E Plants and Anima throughout the White Sands Resource Area an shown on this map.

JRCE: BLM Las Cruces District Files 1981.

FIGURE 1. Recommended Mitigating Measures



UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
Las Cruces District Las Cruces N.M.

WHITE SANDS RESOURCE AREA

RECOMMENDED MITIGATING MEASURES

LEGEND

MITIGATING MEASURES KNOWN BEFORE EA

1 – Caballo Mountain Communication Site
2A – Engle Ecological Plot
2B – Cuchillo Ecological Plot
2C – Nordstrom Ecological Plot
3 Rattlesnake Hill Limited ORV Area
4A Jornada del Muerto Wilderness Area
4B Brokeoff Mountain Wilderness Area
5 WSMR Extension Area

MITIGATING MEASURES DEVELOPED FROM EA

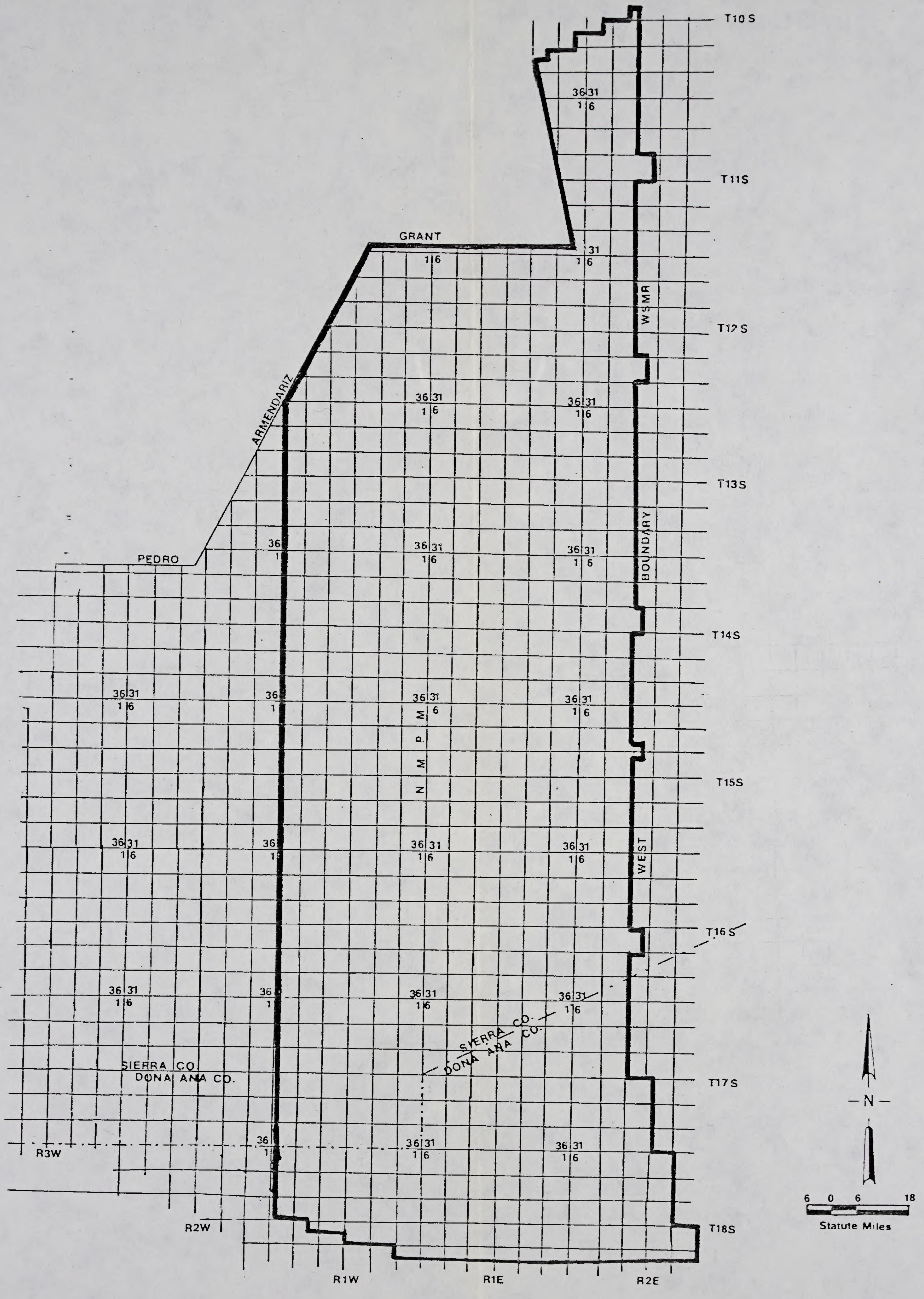
8A – Lee Ecological Plot
8B – Trujillo Ecological Plot
8C – Danley Ecological Plot
9 – Rattlesnake Hill
10 – Alamo Mountain
11 – Tularosa River
■ 12 – Sacramento Escarpment

NOTE: Mitigating Measures 6 – Protection of Cultural Resources and 7 – Protection of T or E Plants and Animals apply throughout the White Sands Resource Area and are not shown on this map.

SOURCE: BLM Las Cruces District Files 1981.

FIGURE 1. Recommended Mitigating Measures

MITIGATING MEASURE 5



MITIGATING MEASURE 5

IN REPLY REFER TO:
1790

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
District Office
P. O. Box 1420
Las Cruces, New Mexico
88004

RECEIVED
MAY 17 1982

May 11, 1982

Dear Reader:

A Class Assessment and Environmental Assessment (EA) (NM-030-81-58 EA/CA) of oil and gas and geothermal leasing has been prepared by the [illegible] Resource Area, Las Cruces District, Bureau of Land Management. The EA was conducted to analyze the impacts of energy development in Otero and Sierra Counties and to develop measures to assist in reducing adverse impacts.

Based on these documents, as well as on a finding of no significant impact (FONSI), the management decision is to adopt the proposed action (Alternative 1). The public land in both counties will be leased for oil and gas and geothermal resources subject to the appropriate environmental protection stipulations. In addition, the Otero Management Framework Plan (MFP) is amended to delete the decision which states that leasing will not be allowed on the Alkali Flats in Otero County. Copies of the decision record and FONSI are attached.

If you wish to review the Environmental Assessment, office copies are available at [illegible] North Main (Las Cruces District Office) and [illegible] North Valley Drive (Las Cruces-Lordsburg and White Sands Resource Area Offices) in Las Cruces.

Anyone who believes they may be adversely affected by this decision may file a protest within 30 days of the date of publication of this notice. Such protest must be in writing and contain a brief, concise statement explaining why the District Manager's decision is believed to be wrong. The protest should be filed with the State Director (934), Bureau of Land Management, Post Office Box 1449, Santa Fe, New Mexico 87501.

Sincerely yours,

Daniel C. B. Rathbun
District Manager

Enclosures

IN REPLY REFER TO
1791

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
District Office
P. O. Box 1420
Las Cruces, New Mexico
88004

DEPARTMENT OF THE INTERIOR
MINERALS MANAGEMENT SERVICE
RECEIVED
MAY 17 1982
DMM, Geothermal
Western Region
Menlo Park, CA

May 12, 1982

Dear Reader:

A Plan Amendment and Environmental Assessment (EA) NM-030-81-58 for Oil and Gas and Geothermal Leasing has been prepared by the White Sands Resource Area, Las Cruces District, Bureau of Land Management. The EA was developed to analyze the impacts of energy development in Sierra and Otero Counties and to develop measures to assist in reducing those impacts.

Based on these documents as well as on a Finding of No Significant Impact (FONSI), the management decision is to adopt the proposed action stated in the EA. The public land in both counties will be leased for oil and gas and geothermal resources subject to the appropriate environmental protection stipulations. In addition, the Mesa Management Framework Plan (MFP) is amended to delete the decision which states that leasing will not be allowed in the Alkali Flats in Otero County. Copies of the Decision Record and FONSI are attached.

If you wish to review the Environmental Assessment, office copies are available at 317 North Main (Las Cruces District Office) and 1705 North Valley Drive (Las Cruces-Lordsburg and White Sands Resource Area Offices) in Las Cruces.

Parties who believe they may be adversely affected by this decision may file a protest within 30 days of the date of publication of this notice. Each protest must be in writing and contain a short, concise statement explaining why the District Manager's decision is believed to be wrong. The protest should be filed with the State Director (934), Bureau of Land Management, Post Office Box 1449, Santa Fe, New Mexico 87501

Sincerely yours,

Daniel C. B. Rathbun

Daniel C. B. Rathbun
District Manager

Enclosures

DEPARTMENT OF THE INTERIOR
MINERALS MANAGEMENT SERVICE
RECEIVED
MAY 17 1982
DMM Geothermal
Western Region
Menlo Park, CA

Decision Record

Environmental Assessment

Oil & Gas and Geothermal Leasing in the White Sands Resource Area

NM-030-81-58

Decision

The decision is to continue to allow oil & gas and geothermal leasing and associated exploration, development, production, and abandonment operations within the White Sands Resource (WSRA), subject to the appropriate environmental protection stipulations. The Mesa Management Framework Plan (MFP) is amended to delete the decision which states that leasing will not be allowed in the Alkali Flats.

Alternatives Considered

The decision is the proposed action of the EA. The only other alternative considered was the "No Action" alternative. Under the No Action alternative, no new leases would be issued in the WSRA. This alternative was not considered practical. It is BLM policy to encourage the orderly development of public mineral resources where such development is compatible with multiple use management and environmental considerations.

Management Considerations

The prime function of the EA is to identify areas where present knowledge indicates that potential resource conflicts would be significant enough to either preclude leasing or restrict lease operations. As a result, the mitigating measures developed from the EA will be attached to leases as special stipulations. The EA is not intended to identify all of the possible environmental impacts associated with leasing, nor is it intended to identify all of the possible ways in which to mitigate those impacts. In the future, if analysis of additional resource data indicates that leasing in certain areas should not be allowed or that lease operations should be restricted, the EA can be amended to reflect that new information.

The issuance of a lease does not give the lessee the right to develop at will. After a lease is issued, all subsequent activities on that leasehold are authorized by the U.S. Geological Survey (USGS). Before approval of any surface disturbing activities, the USGS must prepare a site-specific environmental review (in consultation with BLM) of the lessee's proposed plan of operations. It is this site-specific assessment and on-the-ground field inspection which identify potential impacts and the measures to be required of the lessee to mitigate those impacts. This environmental review process and the development of mitigating (and reclamation) measures is repeated for each successive development phase in an oil & gas or geothermal program (i.e., exploration drilling,

development, production, and abandonment). Additionally, there are numerous standard operating procedures which stipulate specific practices and methods to be followed when oil & gas and geothermal operations are conducted on Federal lands.

The EA also serves as an amendment to the land-use plan prepared by BLM in 1974 for what was known at that time as the Mesa Planning Unit. The Mesa Planning Unit contained about 715,000 acres of BLM administered public lands and was located in the southeastern portion of Otero County. The land-use plan contains a management decision relating to oil & gas leasing. That decision states that leasing will not be allowed in the following areas: (1) proposed Cornudas Mountain primitive area, (2) certain lands in the Guadalupe Mountains that have wilderness values, and (3) the Alkali Flats, which have wildlife values.

The tracts of land in the proposed Cornudas Mountain primitive area and in the Guadalupe Mountains were intensively inventoried in 1980 and 1981, respectively. The Guadalupe Mountains did not meet the size criteria on its own. When the adjacent Forest Service RARE II area was dropped with the passage of the New Mexico Wilderness Bill, the Guadalupe Mountains were dropped from consideration. The Cornudas Mountains also did not meet the criteria for Primitive Area or Wilderness Study Area. Both areas are now open to leasing.

The Alkali Flats were identified as having value as resting areas for sandhill cranes. During preparation of the current EA, field examinations and information from the New Mexico Department of Game and Fish indicated that use by sandhill cranes was slight and not considered significant enough to preclude leasing.

Mitigation

Mitigating measure #5 (page 10 of the Draft EA) is amended to read as follows:

> "The area of land located within the White Sands Missile Range Safety Evacuation Area shall be evacuated on those days the missiles are to be fired. Prior to beginning exploration activities, the lesses shall contact the Corps of Engineers in Albuquerque and the Master Planning Branch at White Sands Missile Range in order to be advised of the terms of the safety evacuation agreement and missile firing schedules."

This change is a result of a recommendation by the U.S. Geological Survey. This coordination will assure that operators are aware of missile firing schedules.

Mitigation measure #10 (page 12 of the Draft EA) is amended to read as follows:

> "No drilling or storage facilities will be allowed within 500 feet of the sites listed on the State Register of Historic Places and sites proposed for nomination to the National Register of Historic Places located in:
>
> T. 26 S., R. 13 E., NMPM
> Section 17: S½
> Section 18: E½SE¼, SW¼SE¼
> Section 19: E½
>
> This distance may be modified when specifically approved in writing by the District Engineer of the Minerals Management Service, with the concurrence of the authorized officer of the Bureau of Land Management."

This change is to standardize lease stipulations jointly used by the Bureau of Land Management and the Minerals Management Service (U.S. Geological Survey).

The mitigating measures developed in the EA will be attached to leases, where appropriate, as special stipulations. Whenever a lessee or other party proposes to conduct operations, a site-specific environmental review must be undertaken, at which time additional mitigating measures may be developed.

Recommended by:

3/29/82
Larry Nunez
Area Manager, White Sands Resource Area

Approved by:

Daniel C. B. Rathbun
Acting District Manager, Las Cruces District Office

Concurred with:

Larry L. Woodard for
Charles W. Luscher
State Director, New Mexico

Finding of No Significant Impact

Based on EA #NM-030-81-58, Environmental Assessment - Oil & Gas and Geothermal Leasing in the White Sands Resource Area, the proposed action is recommended for adoption as the leasing policy in the White Sands Resource Area.

The proposed action is not a major Federal action significantly affecting the environment. Therefore, preparation of an Environmental Impact Statement is not necessary.

Larry Nunez

Larry Nunez 3/29/82
Area Manager
White Sands Resource Area

3.32

B2460

Bureau of Land Management
Library
Bldg. 50, Denver Federal Center
Denver, CO 80225